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A Progress Report on the Interagency Strategy for Accelerating Cooperative Riparian Restoration and Management

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Forest Service

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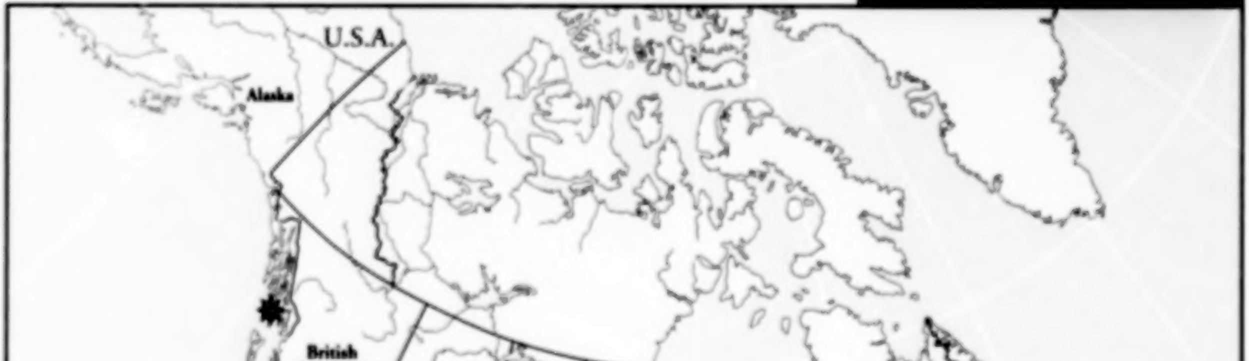

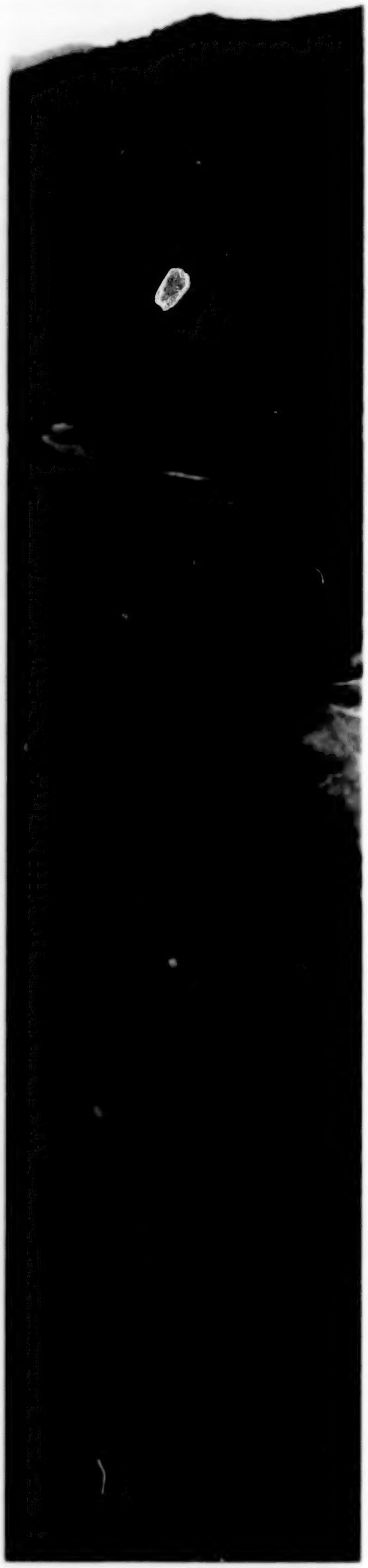

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"...an innovative approach for fostering collaboration and public participation."

Riparian and wetland resources are receiving an increasing amount of attention as more people are realizing the important values produced from this relatively small portion of the landscape. Along with this attention comes increasing conflict surrounding the condition and management of these areas. The interagency strategy, "**Accelerating Cooperative Riparian Restoration and Management**," was developed to address conflicts within the field of riparian-wetland management. It represents an innovative approach for fostering collaboration and public participation. It is designed to facilitate the development of relationships, increased communication, social learning, and, ultimately, the cooperative management of riparian-wetland areas. It is an approach that effectively blends aspects of physical and biological science with dimensions of social science to achieve results for resources and communities.

This strategy was initiated in 1996 by the U.S. Department of the Interior (USDI) Bureau of Land Management, and the U.S. Department of Agriculture (USDA) Forest Service, in partnership with the USDA Natural Resources Conservation Service. A network of individuals was formed to implement the strategy. Implementation has been focused primarily in the Western United States, with some introduction in other parts of the country, Canada, and Mexico. Inherent in this strategy is the recognition that effective restoration and management is best achieved through participation by those with local interests. An extensive outreach and education effort encourages problem resolution at the ground level by the people most affected. Over 250 briefings and presentations introducing the strategy have reached between 8,000 and 9,000 people. To date, over 325 training sessions have been conducted for approximately 10,000 people. Approximately 125 service trips have resulted in assistance to an additional 2,500 people.

The activities outlined in this strategy are successfully achieving its objective of bringing people together to build awareness and understanding, which leads to improved relationships as well as restoration and management of riparian-wetland resources. People are learning skills and being given tools that are enabling them to participate more fully and effectively in addressing resource issues. This strategy provides a model that is responsive to public expectations and desires. Through this type of approach, there is opportunity to achieve sustainable and productive environmental conditions while realizing much higher levels of civil interaction and responsibility.

...a strategy to create strong, lasting, public and private partnerships...

Introduction

The U.S. Department of the Interior (USDI) Bureau of Land Management and the U. S. Department of Agriculture (USDA) Forest Service, in partnership with the USDA Natural Resources Conservation Service, are implementing a strategy to create strong, lasting, public and private partnerships to address riparian-wetland restoration and management. Riparian-wetland resources have been a focal point on the landscape for the past several decades. The attention they have received is apparent in both an increased amount of litigation over the values they produce and a rise in the number of conservation programs designed to improve their condition. Riparian areas[1] constitute a small percentage of the total land base, yet they provide tremendous public benefits, some of which are critical to local communities. People are beginning to come together as they recognize the benefits they receive from riparian and watershed function, including long-term water supplies and maintenance of water quality. There is growing awareness and concern about the condition of riparian areas and general agreement that much more can be done to improve their level of productivity and sustainability.

This document describes the underlying principles and the evolving operating framework of an interagency strategy, "**Accelerating Cooperative Riparian Restoration and Management**," which is currently being implemented by the National Riparian Service Team (NRST), made up of members from each agency, and other members of a Riparian Coordination Network. It includes examples of capacity-building efforts with agencies, tribes, and communities that are designed to encourage and enhance collective action at the local level. A diverse list

Capacity: Webster's dictionary defines capacity as "the ability to get work done; the power to analyze ideas and cope with problems." Capacity can reside at the individual, community, and organizational or institutional level.

Collective Action: The term "collective action" refers to the ability to get self-interested parties (individuals or institutions) to work cooperatively for their own benefit. The likelihood of achieving such action is greatly facilitated by the presence or establishment of certain features of social organization, namely trust, norms, and networks or relationships, which are sometimes referred to as social capital.

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[1] The material presented throughout this document applies to both riparian and wetland areas; however, reference is occasionally made only to riparian areas as a matter of convenience.

of contacts illustrates an extensive outreach effort initiated to establish relationships and develop understanding. Feedback regarding the effectiveness of this program to date is provided from a sample of participants, along with an explanation of a formal program evaluation process. Experience from the initial years of implementation, coupled with results from the program evaluation, will help shape the activities of the coming years.

The Strategy

In March 1996, the agency heads of the USDI Bureau of Land Management and the USDA Forest Service agreed to implement a strategy for the purpose of "***accelerating cooperative riparian restoration and management***." The USDA Natural Resources Conservation Service became a principle partner in this strategy. The agencies recognized that because riparian-wetland areas often pass through or are shared by numerous landowners, a collaborative approach applied at the ground level, in a watershed context, is essential for success. The nature of this strategy is clearly identified in the following statement from the initial charter:

"Restoration will not happen by regulation, changes in the law, more money, or any of the normal bureaucratic approaches. It will only occur through the integration of ecological, economic, and social factors, and participation of affected interests."

The agencies recognized that because riparian-wetland areas often pass through or are shared by numerous landowners, a collaborative approach applied at the ground level, in a watershed context, is essential for success.

The strategy is designed to address one of the major barriers to achieving healthy systems, the polarity and gridlock created from strongly held values and interests. While awareness regarding the importance of riparian-wetland areas is increasing, there is considerable disagreement about the existing conditions of these resources, the types of uses that are appropriate, and the treatments and tools that can be successfully employed to restore and maintain them. The ability to achieve success in this endeavor is dependent upon being able to bring communities of people together to create a common vision for productive and sustainable riparian-wetland conditions. This strategy is guided by the assumptions that to be effective, riparian restoration and management must:

- Ensure management and problem resolution at the ground level by the people most affected
- Be based on common goals, objectives, and, perhaps most importantly, common sense
- Promote establishment of common terms, definitions, and methods
- Focus effort where there is a high probability for positive change with a reasonable investment
- Encourage voluntary restoration of private lands

The strategy is designed for working directly with people on the land, in their location, focusing on their issues. It can best be described as helping people to reach enough agreement about the

Through this strategy, diverse interests come together to develop a common vision.

condition of riparian areas that they take action to restore and manage them for the sustainable production of values and benefits. This is accomplished through a deliberate effort of bringing people together to encourage relationships, build trust, and create a common vision. More specifically, the strategy provides a way of working with people that honors their values and, at the same time, helps them move beyond conflict to cooperation.

The key practice in this strategy is having people focus on the attributes and processes that create the values they seek. Examining the physical functionality of a riparian area is an essential first step. The foundation tool for this strategy is the proper functioning condition (PFC) assessment, which is outlined in Technical Reference 1737-15, "A User Guide to Assessing Proper Functioning Condition and the Supporting Science for Lotic Areas" (Prichard et al. 1998) and Technical Reference 1737-16, "A User Guide to Assessing Proper Functioning Condition and the Supporting Science for Lentic Areas" (Prichard et al. 1999). PFC is not only a method for assessing the physical functionality of riparian-wetland areas, it is also a communication tool that provides a common vocabulary when working to build understanding among diverse stakeholders.

The interagency NRST was formed to lead the implementation of this strategy. The mission, "***healthy streams through bringing people together***," is being achieved through the activities of an extended Riparian Coordination Network, which includes the NRST; agency Riparian Program Coordinators at the state, regional, and national levels; and State Cadres composed of agency and nonagency individuals. Implementation has been focused primarily in the Western United States, with some activities in the Midwest and Southeast as well as in Canada and Mexico.

The State Cadres' front-line role in this strategy has been to facilitate the community-based outreach and education effort. Once a diverse group of interested participants has been organized. Cadre members teach the PFC assessment as a way of providing common terms and definitions designed to increase understanding and foster effective communication. They participate at various intervals throughout the year, while the NRST operates full-time, doing outreach, providing services, including training and assessments, and providing guidance on management and monitoring. The agency Riparian Program Coordinators are key in supporting State Cadres and in building an understanding of how this approach integrates with, and complements, ongoing efforts.

The elements of this strategy are grounded in the human and social dimensions of resource management, as well as in the science dimension. Implementation of this strategy is increasing opportunities to integrate knowledge by bringing together interdisciplinary expertise and local interests to achieve cooperative restoration and management. It is a conscious effort to lay a foundation of understanding by providing specific and essential information relative to riparian resources to build the capacity for better decisions and collective action.

Activities to Date

The interagency strategy, "**Accelerating Cooperative Riparian Restoration and Management**," could not be accomplished without the participation of the Cadres in the 11 Western States and British Columbia.

Train-the-Trainer Workshops

To implement this strategy, Cadres were formed and then received instruction in one of two week-long, train-the-trainer workshops. These were held in 1996 and 1997 at the Bureau of Land Management's National

Participants learn trend monitoring for riparian vegetation.

Training Center in Phoenix, Arizona. Eighty-three people attended, including resource specialists from the Bureau of Land Management, Forest Service, Natural Resources Conservation Service, state agencies, universities, and the private sector. Here they were grounded in the philosophy of the initiative and assigned their roles and responsibilities as Cadre members. Each person was presented a basic curriculum and given a set of instructional materials. Various teaching methods were presented, as was a synopsis of the background science for the PFC assessment method.

As people change jobs, move, or retire, the Cadres recruit new members. The NRST then provides additional train-the-trainer workshops. One was held in 1999 in Ellensburg, Washington, with 31 participants, and another in 2001 in St. George, Utah, with 17 participants. Based on the number and replacement rate of new Cadre members, this service is needed about every 2 years.

Riparian Coordination Network Workshops

Every other year the NRST sponsors a workshop for all Cadre members and agency riparian program coordinators (Phoenix in 1998, Reno in 2000, and Ogden in 2002). The principal goal of these workshops is to strengthen and advance the strategy through:

- Reviewing the reasons for and purpose of this approach
- Providing a forum for sharing what is working and what isn't
- Discussing and developing new ideas, strategies, and products
- Focusing on ways to strengthen agency support
- Determining the highest priorities for the Network

These workshops are essential steps in the evolution and continuation of this strategy.

These workshops are essential steps in the evolution and continuation of this strategy. The Cadre members have an opportunity to share their experiences and needs, creating a sense of solidarity while building support for moving the program forward. Many good ideas are exchanged, as are newly developed teaching aids. Group discussions help work through issues such as quality control and Cadre development.

Assistance with Cadre Training Sessions

To lend support, each year the NRST attends workshops conducted by the State Cadres. This is done partially to help ensure the presentations are thorough and consistent, and it also provides an opportunity to offer suggestions and assist with instruction, if needed.

Cadre Development

The NRST also provides assistance to help build capacity within the Cadres. During the all-Network workshops, Cadres identify additional activities they would like to pursue, along with new skills they would like to acquire. In response to the Cadres' requests, several types of training have been provided:

- "Grazing Management for Riparian Areas" - Some of the Cadres are following up the PFC training with sessions on grazing management. The NRST helped the Idaho and Montana Cadres by providing course materials and developing a 1-day course format.

- "Monitoring the Vegetation Resources in Riparian Areas" - Many Cadre members are interested in learning and teaching the latest monitoring methods. Monitoring for trend is a critical activity and Dr. Alma Winward's three-part methodology is one of the most effective ways to accomplish this. The NRST has coordinated three workshops for the Cadre members at Richfield, Utah, La Cueva, New Mexico, and Ritzville, Washington, training 55 people.

The NRST is examining ways to provide more guidance and training in the human and social dimensions of this work. This is surfacing as the greatest need for increasing program effectiveness.

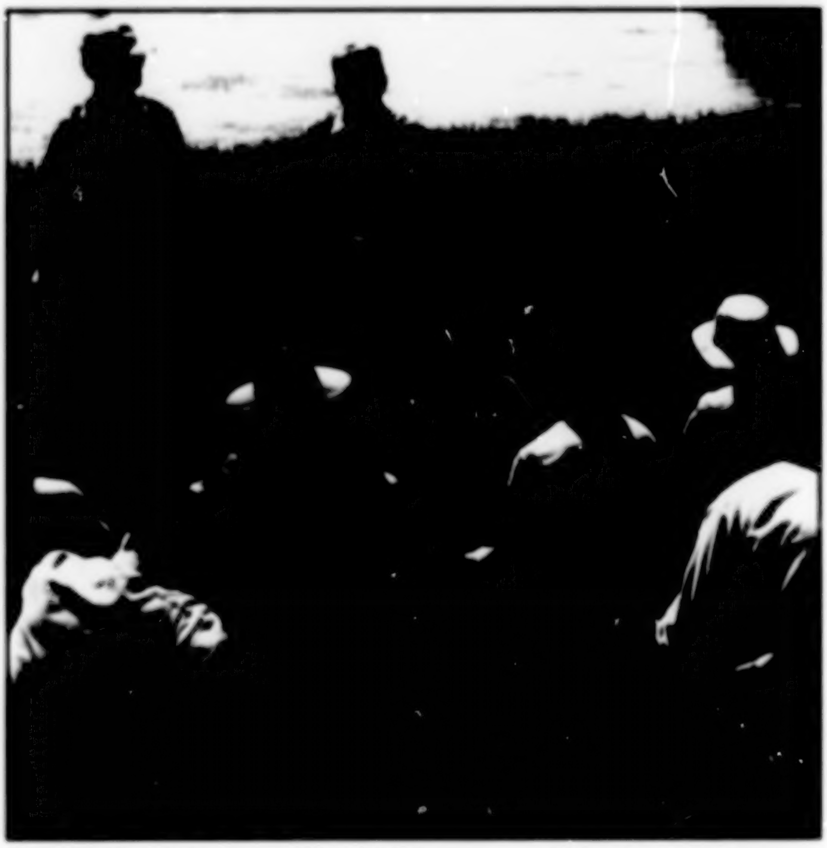
Agency Support

The NRST works with agency leaders, managers, and riparian program leads to build an awareness and understanding of this interagency strategy. The Cadres need leadership support from all organizational levels to ensure they are provided the time and financial resources to participate fully in this initiative. The NRST strives to build this support through increasing integration with various agency programs and demonstrating that this is one additional approach agencies can employ to help meet legal obligations and achieve strategic plan goals and objectives.

Communication

There are a number of methods the NRST uses to maintain communication both with members of the Riparian Coordination Network and with interested parties outside the Network:

- Electronic Mailing Lists - The NRST has established electronic mailing lists for the entire Riparian Coordination Network. Most Network communication is through this venue.
- Network Directory - The NRST also produces and maintains a hard-copy directory of the entire Network for internal and external use.



Don Prichard, Bureau of Land Management fisheries biologist and riparian-wetland specialist, teaches alongside Bill Cunningham, Natural Resources Conservation Service California Cadre coordinator.

- Conference Calls - The NRST has at least two conference calls per year with the Cadre coordinators. The NRST also has periodic conference calls with each individual Cadre.

- "Full Stream Ahead" - The NRST produces a quarterly newsletter of the Riparian Coordination Network activities and other items of interest.

- Annual Accomplishments Report - The NRST compiles reports that describe all the activities of the Riparian Coordination Network for each fiscal year.

- Web Site - The NRST makes information available through their Web site at www.or.blm.gov/nrst.

Outreach and Education

While the activities of the Riparian Coordination Network fall into several categories, most of them are in support of the extensive outreach and education component of the strategy. This component requires deliberate communication and marketing in the form of briefings and presentations. The members of the Network have made contact and interacted with a series of key individuals, groups, agencies, and organizations to describe the initiative and the available services and to invite participation. These entities are listed in Appendix A. Over 250 of these activities have reached between 8,000 and 9,000 people. The NRST and State Cadres have conducted over 325 training sessions for approximately 10,000 people. A list of training materials developed can be found in Appendix B. Additional technical assistance has been provided in the form of service trips, which involved conducting riparian-wetland assessments and providing management and monitoring guidance. Approximately 125 of these activities have served an additional 2,500 people.

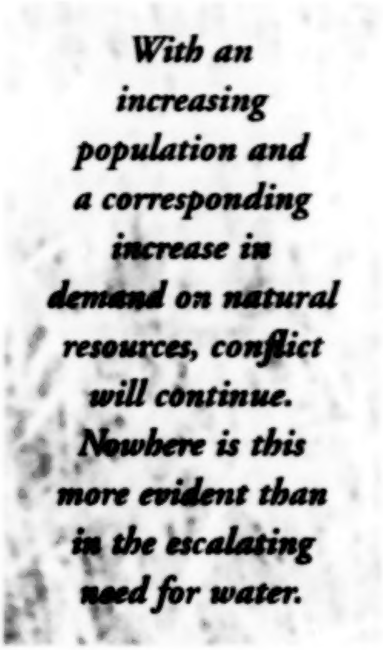
Dr. Alma Winward, Forest Service, teaches monitoring of vegetation resources in riparian areas.

Several of these service trips are highlighted in Part 2 of this document.

Evaluating the Program

As with any endeavor, it is necessary to examine if overall objectives are being met and to determine whether changes are needed to improve the effectiveness of this strategy. The NRST is currently engaged in both informal and formal evaluation processes. Informal program examination is ongoing and, to date, has occurred in several ways. First, much has been learned through the aggregation of input from the experiences of Network members. The NRST also organized a workshop in May 2001 to solicit feedback on the current situation from both a mix of people within the Network and a diverse representation of external interests. Additional insight was garnered through a limited survey of service trip participants completed in the fall of 1999. Examples of the responses received can be found in Appendix C.

In addition to the informal evaluation process, the NRST is conducting a more formal evaluation. To ensure validity of the results, this evaluation uses two complementary research approaches. The first stage involves conducting a large-scale, quantitative mail survey, which is designed to attain generalizable and objective measures of customer and participant satisfaction and program effectiveness. Respondents were randomly selected from a list of individuals who have participated in training sessions conducted by the NRST and State Cadres between 1995 and 2000. The second stage involves performing a qualitative, in-depth analysis (interviews) of the extended Riparian Coordination Network, with the goal of producing a comprehensive understanding of the factors that influence program success. A stratified, purposeful sampling technique was employed to ensure that the population interviewed was representative of a full range of viewpoints. The formal evaluation process was approved by the Office of Management and Budget in the spring of 2001. The study is scheduled to be completed by December 2002.



With an increasing population and a corresponding increase in demand on natural resources, conflict will continue. Nowhere is this more evident than in the escalating need for water.

Looking Ahead

The new century brings a growing concern for the environment. With an increasing population and a corresponding increase in demand on natural resources, conflict will continue. Nowhere is this more evident than in the escalating need for water. Increasingly, people are recognizing the importance of restoring and maintaining healthy functioning watersheds at the landscape level, beyond political boundaries. Furthermore, it has also been recognized that having the best science is not enough. There is increasing evidence that effective solutions arise from the workings of citizens and stakeholders who, in addition to using technically correct information, engage in processes that address the human and social dimensions of resource management issues. This evidence substantiates the need to increase efforts toward building the capacity within communities to confront and resolve complex and contentious problems.

Experience, as well as informal participant feedback, confirm that both the Riparian Coordination Network and the PFC assessment tool have been effective in bringing people together to develop a common understanding of riparian-wetland function. However, while teaching PFC concept to a broad spectrum of people is fundamental to meeting the goals of the initiative, equal emphasis must also be placed on building the capacity of the community to achieve collective action. When applied with the proper mix of science, economics, and technology and working with the people most affected by the outcomes, this strategy works. However, experience and feedback also indicate that when too much focus is given to the PFC tool, these other important dimensions are overshadowed. The emphasis and practices of the Riparian Coordination Network must be shifted towards the original focus of the strategy. In addition, there is a clear need to increase followup contact with clients and customers. It was found that additional services are sometimes necessary to help people take subsequent steps in the process of cooperative restoration and management. These findings support the importance of building a feedback protocol into the current operating framework, beyond the existing program evaluation process.

The NRST is working to enhance the social components of the strategy. Options include providing resources for consensus-building, developing capacity within various communities for addressing resource conflicts, and prioritizing current efforts based on existing community capacity. Specific activities are targeted toward managers and community leaders. An area of great opportunity exists to build community capacity where managers and leaders can create environments in which people are able to work together with respect in a learning environment. In order to increase its implementation and effectiveness, additional effort must be directed toward finding and engaging more individuals whose values, interests, and talents are aligned with the nature of this strategy. Deliberate outreach will continue, since relationships are critical to effecting positive change in individual beliefs and behaviors and institutional culture.

Deliberate outreach will continue, since relationships are critical to effecting positive change in individual beliefs and behaviors and institutional culture.

National Emphasis

Over the past several decades, there has been increasing distrust and disconnection between government agencies and the people they serve. Natural resource issues have become highly volatile in many areas and people feel their livelihoods and economy are threatened. There is broad consensus on the need for, and value of, clean water and healthy riparian-wetland habitats. However, an environment of lawsuits and regulatory approaches often leaves out the people who must implement solutions and those who will be most directly affected by the consequences of decisions.

This strategy was designed and is being implemented with a recognition that it took a critical mass of people on the land, over time, to bring riparian-wetland resources to the condition they are in today. As a result, society is dealing with a legacy of many programs and practices that are now considered unwise or even harmful. The overarching purpose of this strategy continues to be the creation of a new critical mass of people who interact with and manage riparian-wetland resources, basing their actions on shared knowledge of the functions and processes that constitute sustainability.

In an effort to address the current situation, the Forest Service, Bureau of Land Management, and Natural Resources Conservation Service have developed strategic plans designed to reduce bureaucracy, increase public participation, and improve service, performance, and citizen satisfaction. Common within these plans is the focus on a healthy, diverse, and productive land base, both public and private, the essence of which is the development of sustainable systems for present and future generations. Woven throughout is the relationship of people and the land, one of interdependence and harmony. Included is the recognition of the importance of strong collaborative partnerships in the creation of a shared vision for natural resource conservation.

Expectations involve working effectively and efficiently to provide multiple benefits for people within the capabilities of the ecosystems. In order to meet these expectations, agencies need to actively seek ways to leverage interests and resources while sharing skills and information.

Management initiatives must reflect a back-to-basics approach that emphasizes cutting red tape, putting customers first, and empowering people to get results. The interagency strategy, "**Accelerating Cooperative Riparian Restoration and Management**," is one way the Forest Service, Bureau of Land Management, and Natural Resources Conservation Service are working together to achieve the desired outcomes stated within the agencies' goals and objectives. Furthermore, this effort is intended to bring together all affected interests for the purpose of building capacity toward the development and implementation of solutions that meet both the needs of resources and communities.

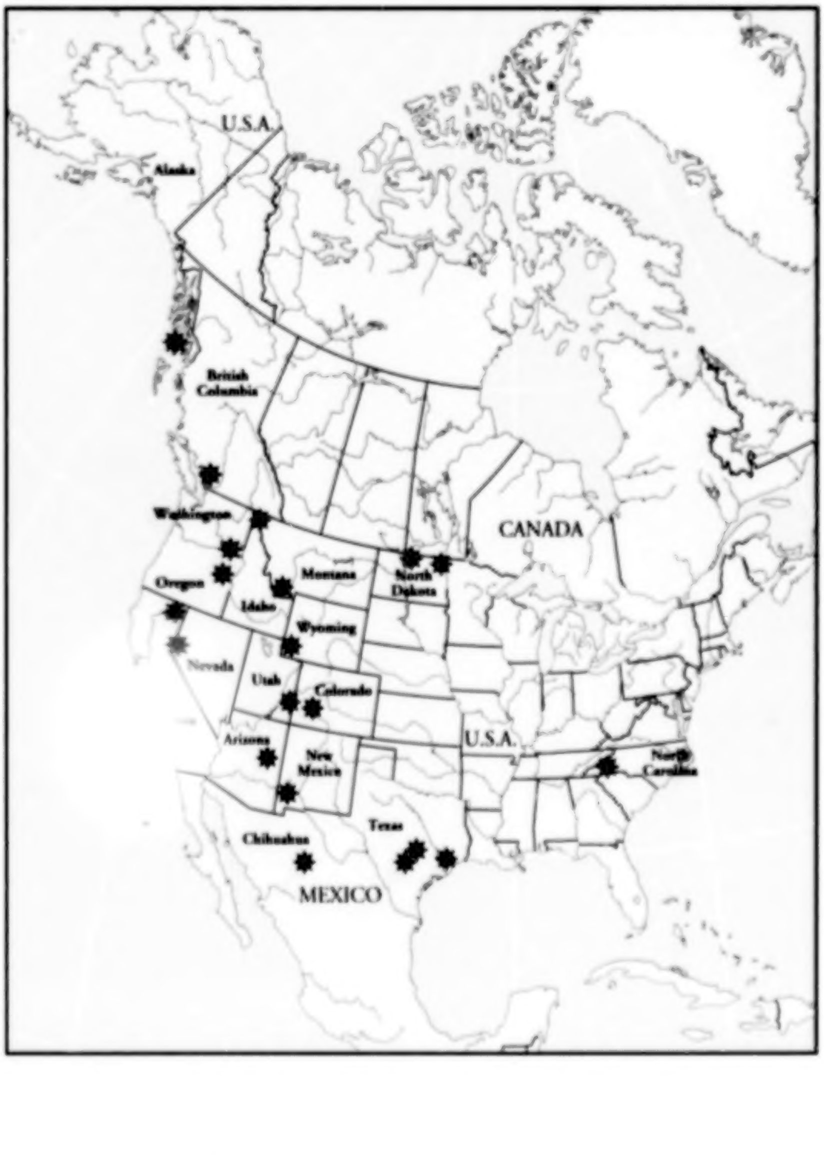
Expectations involve working effectively and efficiently to provide multiple benefits for people within the capabilities of the ecosystems. In order to meet these expectations, agencies need to actively seek ways to leverage interests and resources while sharing skills and information.

As awareness and support of this strategy grow, a diverse customer base continues to evolve. The Riparian Coordination Network continues to share the rewards and satisfaction that come from providing a service that is both needed and appreciated. Additionally, the increased knowledge and skills resulting from this effort are enabling citizens to participate more fully and effectively in addressing land management issues. This approach is providing an opportunity for the American public to benefit from a government that is more integrated, consistent, efficient, and cost-effective. The legacy of this effort will be the choices made possible for future generations through the sustained productivity of this nation's watersheds, riparian areas, and wetlands.

The most important aspect of each activity is to ensure inclusion of participants...

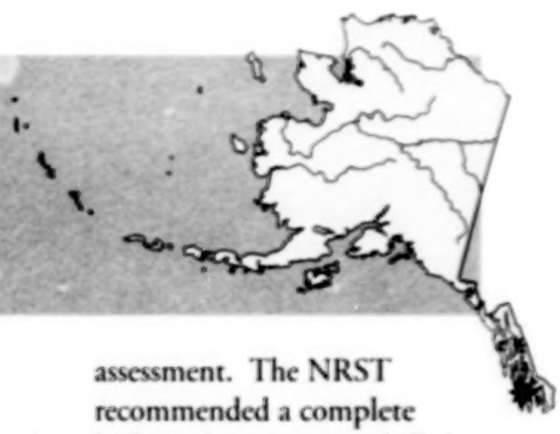
Following are some examples of service trips taken to help implement cooperative riparian area management activities. The majority of the activities have taken place in the Western United States. A concerted effort has been made to introduce the strategy in other states, Canada, and Mexico while maintaining the focus in the West. However, assistance has always been provided to people who are interested in implementing the strategy in their location. In fact, other states visited, but not included in these examples, include Illinois, Kansas, Minnesota, Oklahoma, South Carolina, and South Dakota.

The activities within this strategy strive to influence a large geographic area, while also addressing a broad array of issues. Water quality and quantity, as well as aquatic habitat and endangered species, are primary concerns. Conflicts surrounding impacts from roads, recreation, grazing, and urban development precipitate many of the service trips. On several occasions, litigation has been the impetus for requests to provide an outside expert opinion. The most important aspect of each activity is to ensure inclusion of participants with a diverse mix of interests.



Alaska: Klawock Watershed Assessment

Craig, Alaska • June 7–9, 1999



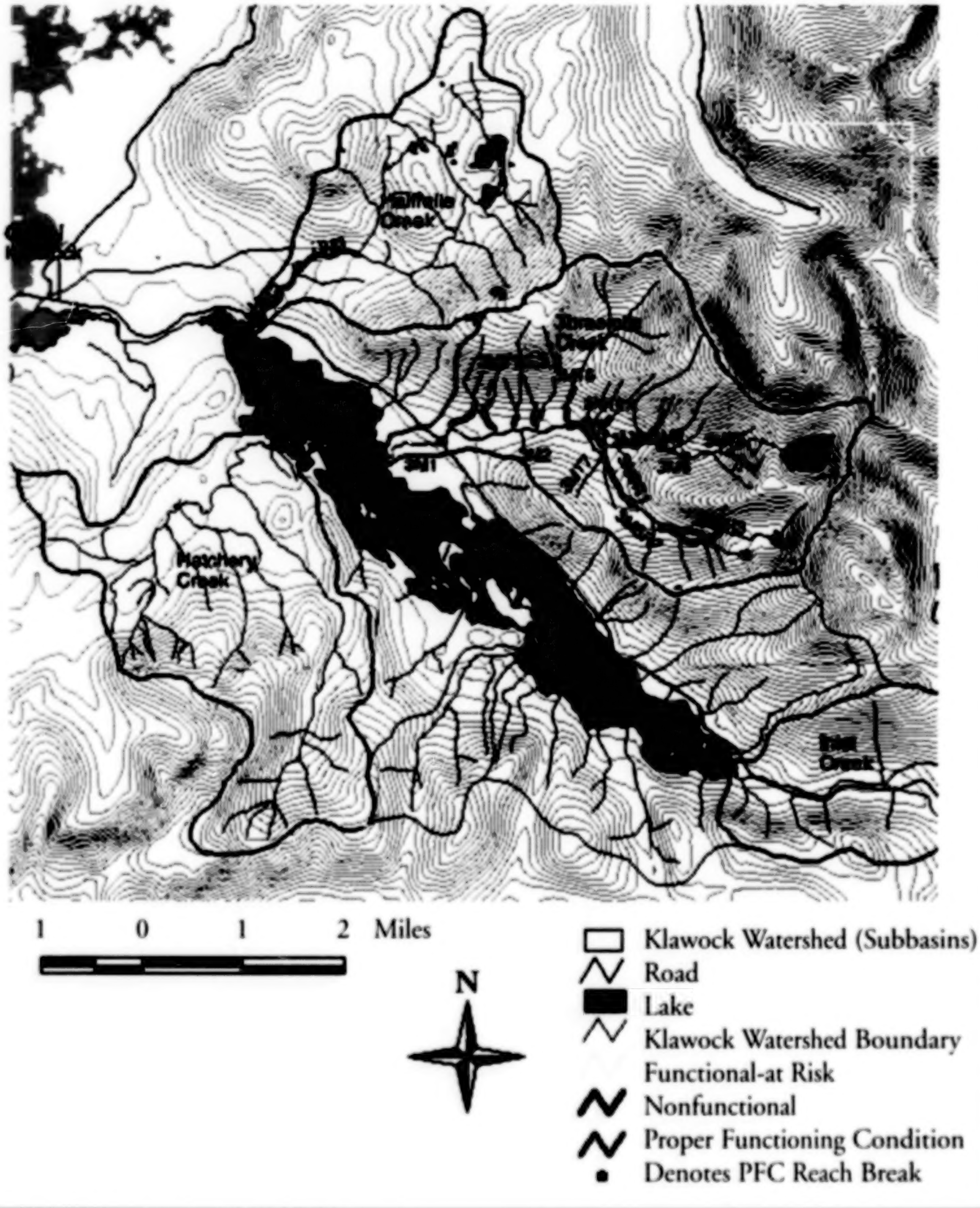
The Central Council Tlingit and Haida Tribes of Alaska acquired a grant from the U.S. Environmental Protection Agency to conduct an assessment of the Klawock watershed. The Central Council solicited the Forest Service, Craig Ranger District, for assistance in conducting a functional assessment of streams and wetlands in the watershed. Craig Ranger District personnel then requested assistance from the National Riparian Service Team (NRST) to help initiate this process. Their intention was to include both lotic and lentic proper functioning condition (PFC) assessments as part of the project.

The Klawock watershed is located in southeast Alaska on the west coast of Prince of Wales Island. It is a small coastal watershed approximately 30,000 acres in size, with Klawock Lake at its center. It is owned primarily by tribal corporations and the Forest Service. Major concerns are centered around the decline of the salmon runs. Fish produced in this region are important to the subsistence, sport, and commercial fisheries. The sockeye run that uses Klawock Lake has declined from a high of 90,000 adults to about 2,000 over the last 40 years. Other issues included the need to develop a municipal water supply from the watershed and the impact of future housing construction.

Initial discussions centered on how to design the study, how to use PFC assessments in the context of a watershed analysis, and development of a final report that would present the findings of the PFC assessments coupled with other inventory methods. A meeting was held with the tribal corporation, city staff, Forest Service, and other interested parties to explain the approach and determine if it would meet the needs identified. The NRST provided training and assisted the local interdisciplinary team in the first round of assessments. Roads are a major influence in this watershed, and the NRST provided advice about how to look at road impacts and incorporate this into the assessment. The NRST recommended a complete biological assessment of all the fish and their habitat needs. The combination of the PFC assessment information with the biological analysis was needed to sort out the important factors influencing local values.

The benefits that emerged included identification of riparian-wetland conditions and the linkage with land management practices, documentation of the baseline inventory, and a way to prioritize restoration within the watershed. By developing consistency and providing common terminology, the PFC concepts and assessment results will assist the local watershed group in building consensus as they establish needs for additional grants and set priorities for allocation of financial resources.

Stakeholders:
Tlingit and Haida Tribes of Alaska; Environmental Protection Agency; and Craig Ranger District, Tongass National Forest.



Klawock Watershed PFC Assessment 1999

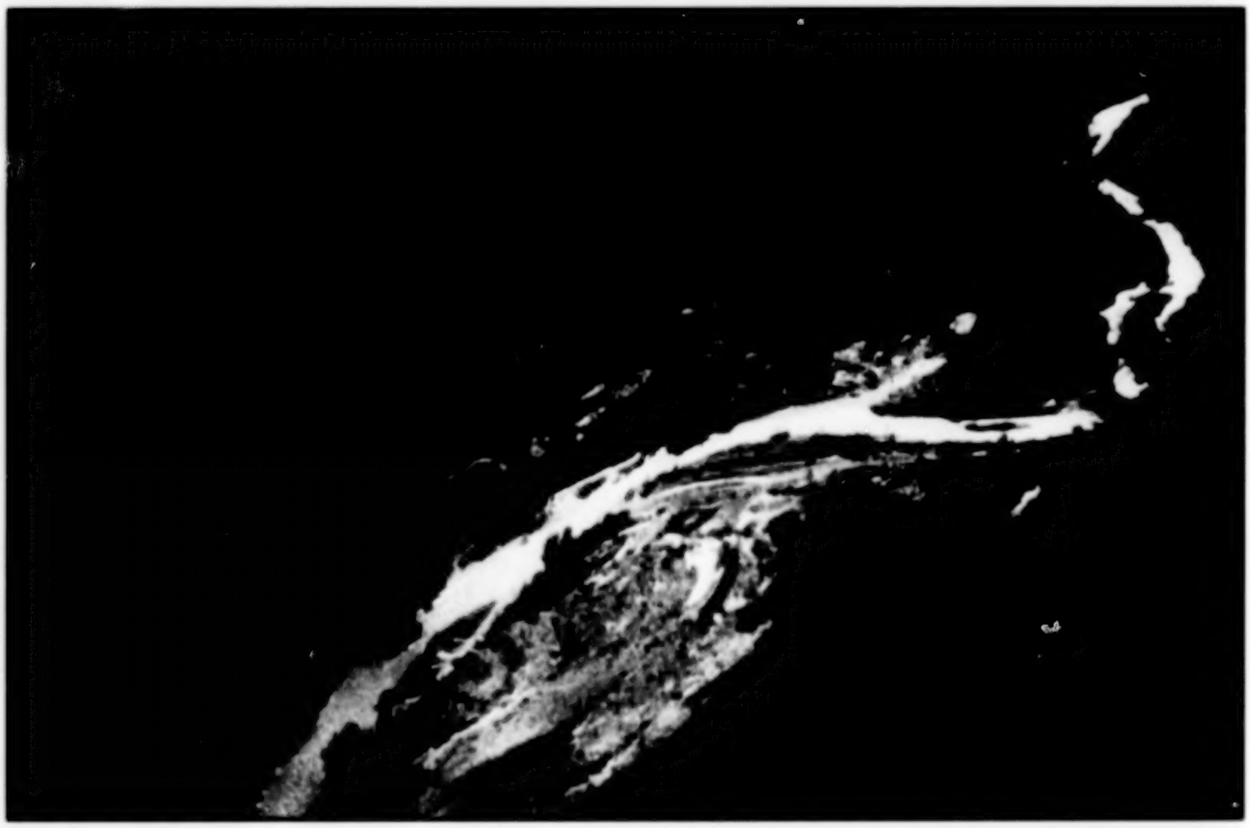
This map was developed for stakeholders to overlay with fish habitat and water quality data as a tool for prioritizing restoration activities.

Arizona:
Blue River Assessment and Management and Monitoring Recommendations

Apache-Sitgreaves National Forest, Arizona
October 31–November 2, 2000, and May 1–2, 2001

What is the current condition, as well as the future potential, of the riparian plant communities and fish populations of the Blue River? These are questions employees of the Apache-Sitgreaves National Forest asked the National Riparian Service Team (NRST) to help them address. The assessment results and team recommendations would be combined with other studies in a watershed analysis for consultations on threatened and endangered fish species with the U.S. Department of the Interior Fish and Wildlife Service.

Riparian-wetland vegetation along the entire length of the Blue River has been severely altered by a number of actions. In the early 1900s, trees and down wood were cleared from the riparian area and stream channel when the river was used to transport logs to mining operations on the San Francisco River. Roads were built for access to private and public lands, livestock were allowed access year-round, and some river



Trees and shrubs are reestablishing on the Blue River near Blue, Arizona.

segments were channelized and diked. The loss of the riparian trees and down wood caused big changes to the floodplain and stream channel characteristics. Root masses and large woody material resist the forces of water and hold the streambanks and stream channel in place during high-flow events. Without them, accelerated erosion of the streambanks and streambed occurred.

Despite the near complete destabilization of the Blue River, there is now evidence of recovery. Riparian trees and large woody material are no longer removed, and livestock grazing management on national forest lands has been significantly changed. Cobbles and gravels that move with each high-flow event make a challenging place for new tree sprouts and seedlings to get established, but at least three age classes of trees (sprouts, young, and mature) were observed in classical scroll patterns on some point bars. Newly colonized point bars are still very susceptible to erosion, especially in the absence of a large wood matrix, so periodic setbacks must be expected during recovery. It was estimated that at least three to four more regeneration episodes (60–80 years, plus or minus a decade or two) will be required before sufficient large woody material will be available to start overcoming the existing accelerated channel dynamics. Trees need to grow, fall over, and become incorporated into the floodplain where a new generation will grow again. The NRST recommendation for the Blue River is to manage for riparian trees and shrubs. Cottonwood and willow should be the emphasis for the main stem of the Blue River and the higher gradient tributaries. Monitoring recommendations were given, including attributes to be measured in the short-term, mid-term, and long-term.

The NRST's role during technical service trips is to provide opinions and advice that the requesting managers can then use, in conjunction with other information, to formulate alternatives and make appropriate decisions. Findings and recommendations provided in the trip report should not be considered as direction, but rather as information to be used by decisionmakers and stakeholders in developing a course of action. Recommendations are intended as "food for thought" when addressing management of the area. As always, it will take the collaboration of local people with local knowledge and experience to design the site-specific plan necessary to successfully allow catchments to heal.

Stakeholders:
Apache-Sitgreaves National Forest, Greenlee County Road Department, Natural Resources Conservation Service, U.S. Fish and Wildlife Service, and Arizona Department of Environmental Quality.

California:
Warner Mountain Rangeland Project

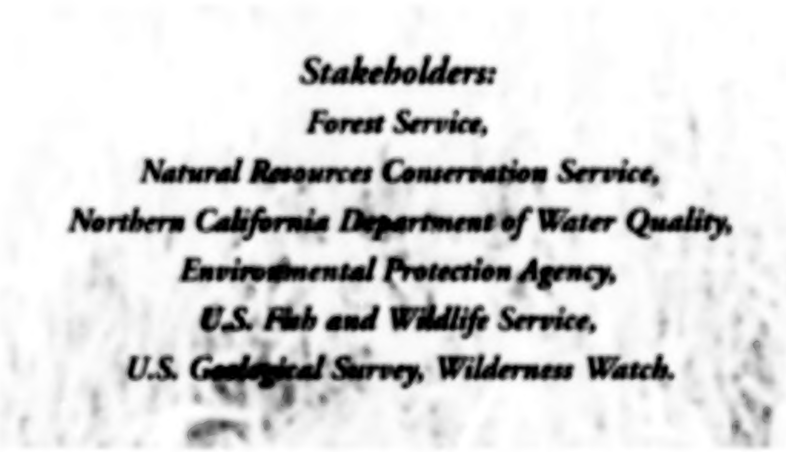
Modoc National Forest, California
July 31–August 3, 2001

The Warner Mountain Ranger District in the Modoc National Forest has been involved for over 21 years with the Modoc/Washoe Experimental Stewardship Program (ESP), which was implemented to promote collaborative management in the Warner Mountains. This program is a cooperative effort involving local, state, and federal governments; environmental interests; livestock producers; and others. Most recently, the ESP has been instrumental in the development of the Warner Mountain Rangeland Project, which involves conducting an environmental assessment describing ecological conditions and potential grazing management alternatives for the area.

Members of the Modoc/Washoe Experimental Stewardship Program come together to resolve resource issues.

Participants develop a common understanding of the area.

There have been many successes attributed to the program; however, there are still challenges to address and overcome. Livestock management within the Parker Creek drainage of the South Warner Wilderness Area was of particular concern to Wilderness Watch, a national, nonprofit wilderness advocacy group. Both the livestock producers and local government were concerned that wilderness advocates were simply trying to eliminate livestock grazing from public lands. At the suggestion of the Warner Mountain district ranger, the various entities involved agreed to have the National Riparian Service Team (NRST) provide a third-party review. The NRST was asked to conduct an assessment and provide management recommendations because of disagreements and potential litigation over present conditions and proposed management options presented as part of the Warner Mountain Rangeland Project. By ensuring that all interests, including Wilderness Watch, were involved in the on-ground assessment and subsequent discussion of potential management options, the need for certain improved management practices was accepted and litigation was deferred for at least 2 years. All parties were able to agree on the criteria from which to measure success or failure after the 2 years of improved management.



Stakeholders:
Forest Service,
Natural Resources Conservation Service,
Northern California Department of Water Quality,
Environmental Protection Agency,
U.S. Fish and Wildlife Service,
U.S. Geological Survey, Wilderness Watch.

Canada: Whistler Community Training and Assessment

Whistler, British Columbia, Canada • October 4–7, 1999

The region of Whistler, British Columbia, supports a billion dollar economy from skiing and other forms of outdoor recreation. Two watersheds supply both the city of Whistler and the Whistler Mountain Ski Resort. Drinking water is still untreated; however, extensive recreational use is placing increased pressure on the municipality's riparian and aquatic resources. A threat to the condition of these resources is a threat to the economic base of the area.

The National Riparian Service Team (NRST) was asked to provide training on both lotic (running water) and lentic (standing water) proper functioning condition (PFC) assessment methods to help build an understanding for the development of a community-based, watershed stewardship strategy. Individuals from various departments of the Resort Municipality of Whistler, the Whistler Fisheries Stewardship Group, business owners, other government entities, and interested residents attended.

Water quality is the cornerstone for the economy of Whistler.

The NRST was also asked to assess several specific areas and discuss issues such as water quality, spawning and rearing habitat, flood control, and increased development with stakeholders. Assessments were done on the riparian areas between Alta Lake and Rainbow Wetland and the River of Golden Dreams. At the lower end of each reach, the NRST conducted a general review, participants shared their observations, and the group came to a conclusion.

The British Columbia Cadre arranged this field-based session and ensured the involvement of a broad range of interests. The Cadre's hope is that by being introduced to PFC concepts, Whistler can develop a management strategy that will become a model for many other community watershed programs. In addition to providing some proven strategies to augment the cooperative efforts already underway, the session produced specific assessment results leading to several alternatives. The city of Whistler is now implementing many of the recommendations made by the NRST and the British Columbia Cadre.

Stakeholders:
Resort Municipality of Whistler, including Engineering, Parks, Water Quality, Planning, councilors, and mayor; Rotary; Chateau Whistler Golf; Association of Whistler Area Residents for the Environment; Crabapple Creek students; Whistler Sailing; British Columbia Ministry of Environment.

Proper management of riparian resources provides economic benefits for the watershed stakeholders.

Colorado:
Long Gulch Training, Assessment, and Management Recommendations

Gunnison, Colorado • August 27–31, 2001

The Colorado Division of Wildlife, Species Conservation Branch, contacted the National Riparian Service Team (NRST) for assistance with habitat improvement for the Gunnison sage grouse, which is currently a candidate species under the Endangered Species Act. The Division is coordinating with the Bureau of Land Management, Natural Resources Conservation Service, ranchers, and several conservation groups to restore habitat. Their efforts have been focused on the Long Gulch area, a watershed that contains habitat for elk, mule deer, antelope, sage grouse, and other sagebrush obligates. While the Gunnison sage grouse, an excellent indicator species, is the emphasis for restoration and management, the principal goal is to improve the health of the land and provide good sustainable habitat for all species, domestic and wild. Many of the riparian areas presently are below their potential in terms of providing habitat and forage. Large segments of the uplands have high shrub density, a diminished herbaceous component, and low amounts ground cover.

The NRST gave an overview of the concepts of proper functioning condition (PFC) for riparian-wetland areas, with an emphasis on the types of plant species needed for recovery and maintenance. The participants visited the field sites and the NRST provided advice on both active and passive restoration concerns. While visiting the field sites, the group encountered several sagebrush types in varying conditions. The NRST provided a classroom segment focused on identification of sagebrush species and management implications for each.

While livestock management techniques were recommended for the riparian areas, the uplands were in need of an active restoration program to be implemented over the next 25–30 years. This need was incorporated into a goal of treating an agreed-upon percentage of the watershed each year to create a mosaic on the landscape. Specific advice included use of fire and various mechanical and chemical treatments relative to site type and current condition. By improving watershed function over time, the overall objectives for sage grouse, and all the other values desired, will be achieved. The key to success depends upon active and respectful working relationships and a shared vision for the condition of the land.

Stakeholders:
Colorado Division of Wildlife, permittees, private landowners, Gunnison Habitat Partnership Program, Gunnison Sage Grouse Working Group, Bureau of Land Management, and Natural Resources Conservation Service.

Idaho:
Trout Creek Proper Functioning Condition Assessment

Bonners Ferry, Idaho • August 6–9, 2001

The Kootenai Tribe of Idaho, Idaho Department of Fish and Game, U.S. Fish and Wildlife Service, Forest Service, Idaho Department of Environmental Quality, and the Kootenai River Network, have embarked on an ambitious effort to restore stream habitat conditions within the Kootenai River basin in northern Idaho, Montana, and southern British Columbia. The group also is actively engaging private landowners as well as local governments and other interests.

Recognizing the enormity of their task, the group has agreed to initially focus on just one watershed, the Trout Creek watershed, near Bonners Ferry, Idaho. Experience and knowledge gained in that effort will then be exported to other watersheds within the basin. The group also recognizes the need to better understand what is happening with watershed processes before initiating restoration projects. Presently there are several coordinated efforts to collect data relative to water quality, habitat characteristics, and general watershed and riparian condition. These data can all be used to describe the current state of the watershed as a whole and to develop a comprehensive restoration strategy.

Aquatic habitat in the lower portion of the Trout Creek watershed has been altered by agriculture, hydropower operations on the Kootenai River, and homesite development as well as timber management and road construction in the upper portions of the watershed. The Kootenai Tribe of Idaho requested that the National Riparian Service Team (NRST) work with them to

An interdisciplinary team discusses the functionality of Trout Creek near Bonners Ferry, Idaho. Upper and middle portions of the watershed are providing both physical function and good habitat conditions.

assess the physical condition of Trout Creek. The purpose of the assessment was to determine if restoration efforts in the lower portion of the stream are feasible and prudent.

Over a 3-day period, the NRST worked with the project leader to complete a PFC assessment of the watershed. Several others joined the group at various times, including the fish and wildlife director for the tribe. The group was fortunate to be able to discuss current conditions in relation to historic conditions with a resident who had lived in the area for over 30 years, most of that time on the banks of the North Fork of Trout Creek. It certainly seemed that a valuable member was added to the group that day. During its visit, the NRST also held an evening meeting with interested stakeholders.

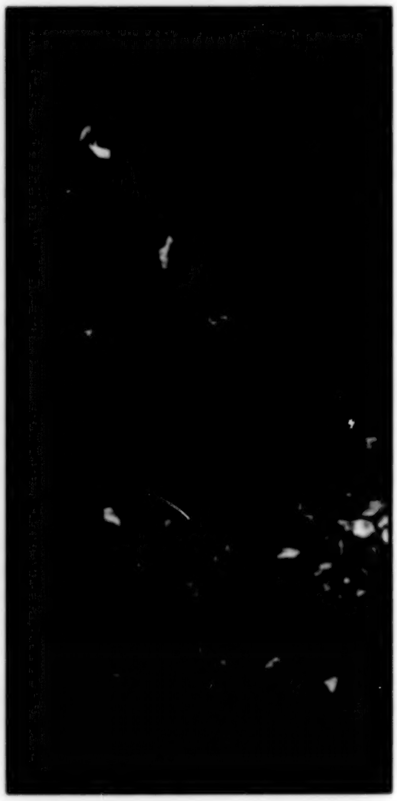
In addition to completing a PFC assessment of the entire drainage, the NRST provided guidance for linking the results with the biological assessment data to create a more complete set of information for determining and prioritizing restoration activities. They also provided recommendations regarding potential management strategies, project development, and monitoring and addressed the possibilities of contacting others who could become involved as the effort moves forward. This locally driven, collaborative, watershed-scale (basin-scale over the long-term) effort is exactly what the NRST strives to encourage and support.

Stakeholders:
Kootenai Tribe of Idaho, Idaho Department of Fish and Game, U.S. Fish and Wildlife Service, Forest [illegible] Idaho Department of Environmental Quality, [illegible] landowners.

The lower reaches of Trout Creek are deeply downcut into the historic Kootenai River floodplain. Desirable riparian plant species are beginning to make an appearance, but functional plant communities are still lacking.

The availability of adequate supplies of clean, safe, and usable fresh water is truly a global issue. The need for healthy streams and riparian areas worldwide is great. In recognition of this, the National Riparian Service Team (NRST) has participated in several efforts in neighboring Mexico to share their approach for accelerating cooperative riparian restoration. Beginning in 1997, the NRST traveled to Creel, located in the state of Chihuahua, and conducted training in partnership with the Bosque Modelo Chihuahua (Chihuahua Model Forest). While there, the team consulted with and trained a diverse group of professionals, academicians, and villagers. In 1999, the team returned to Mexico, working with managers from the 280,000-hectare Santa Elena Canyon Protected Area (which is separated from Big Bend National Park by the Rio Grande), along with local government officials and villagers. As part of this international consultation and training effort, the Bureau of Land Management and Forest Service cooperated in having the principal technical reference used by the NRST, "Process for Assessing Proper Functioning Condition of Riparian-Wetland Areas," translated into Spanish.

The NRST conducted additional training in Casas Grandes with a local group of interested citizens and had a unique opportunity to visit an area made famous by Aldo Leopold. In his book, "Sand County Almanac," Leopold devoted one chapter to "The Song of the Gavilan," which was about the wilderness surrounding the Rio Gavilan and the concerns that he had about its future. As he feared, the livestock, loggers, and roadbuilders have had major impacts on this once pristine area, and the streams and



Wayne Elmore of the NRST discusses the importance of woody species to the improvement of the Rio Conchos near, Bocoyna, Chihuahua.

native Yaqui trout are now in trouble. In many cases, the condition of the streams was similar to those stressed systems found in the southwestern United States. Previous management practices have led to degradation and downcutting; however, the potential still exists for changes in management to result in restoration at relatively low levels of investment. One problem is that the infrastructure to help implement changes, determine appropriate actions, and assign responsibility is not in place. Another problem is that making changes in the face of severe poverty that leaves people few options is difficult at best. Additionally, chemical pollutants, raw sewage, and other factors are severe problems near many communities.

When problems such as these can be avoided or overcome and change can be implemented, the results appear promising. A rancher out of Casas Grandes, working with partner Bill Forbes from the University of North Texas, did implement management recommendations from the NRST. According to recent communications from the rancher, the stream and riparian areas are responding wonderfully.

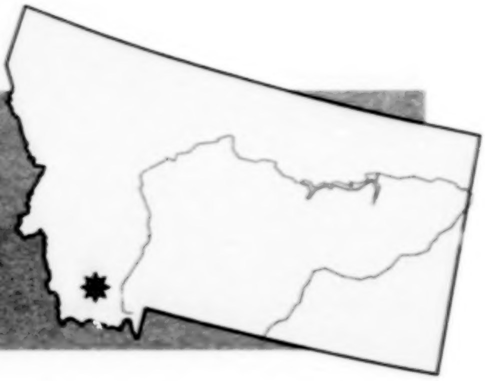
During the trips to Mexico, the services of a simultaneous translator were essential to the success of the presentations and learning. The NRST felt honored to be able to share information that could make a big difference in the lives of so many people.

Headsets were used for translation during a field day at Rio Conchos near Bocoyna, Chihuahua.

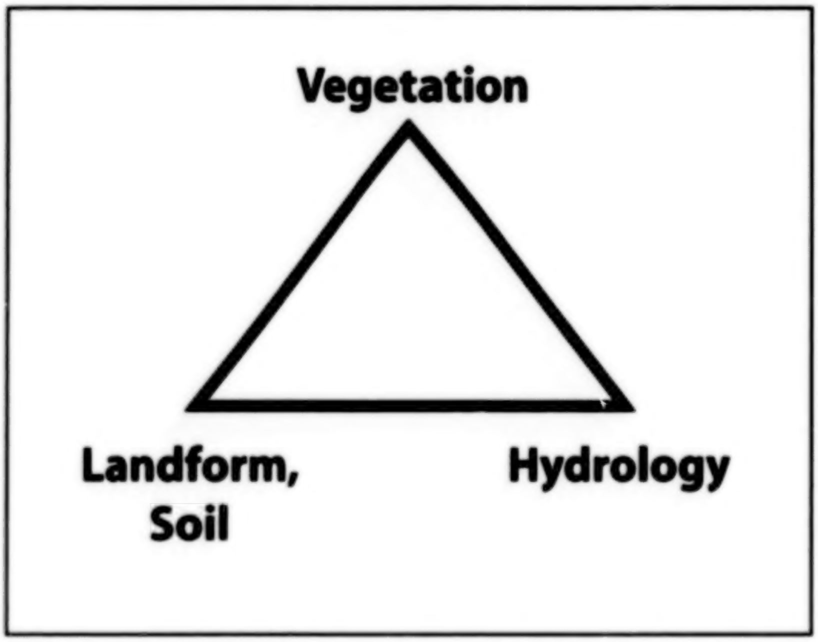
Stakeholders:
Bosque Modelo Chihuahua, University of North Texas, Forest Service International Programs, Big Bend Ranch State Park, Big Bend National Park, National Parks and Conservation Association, The Nature Conservancy Municipia Casas Grandes, Ejido [illegible], Consejo Turismo Casa Grandes, [illegible], Secretaria de Medio Ambiente Recursos Naturales y Pesca, Alchesay National Fish Hatchery, Aldo Leopold Foundation, and various landowners, community members, and university personnel.

Montana:
Beaverhead-Deerlodge National Forest

Dillon, Montana • December 16–17, 1996

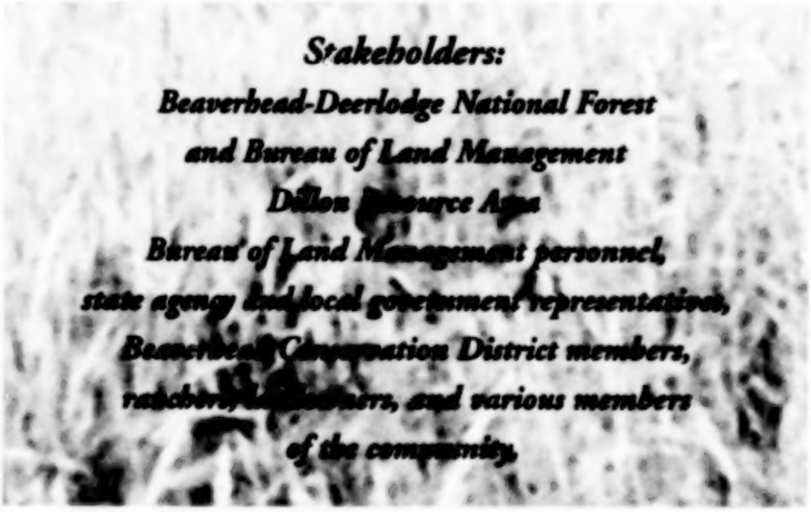


The Beaverhead-Deerlodge National Forest began working on the development and implementation of riparian guidelines in 1989. This was being accomplished on an allotment-by-allotment basis until May 1995, when an out-of-court settlement to a lawsuit filed in March 1994 directed the Forest Service to amend the Beaverhead Forest Plan to include new riparian management direction. The National Riparian Service Team (NRST) was asked by employees of the Forest to: 1) share the latest information on riparian management, 2) review and discuss the parameters currently used to manage riparian areas in the forest, and 3) provide a review of the technical merits of the alternatives proposed in the draft Environmental Impact Statement (EIS). As a result of working with the NRST on their riparian management guidelines and draft EIS, the forest employees subsequently developed a new alternative to the draft EIS.



This illustration is used in classroom training to help participants visualize the interaction among the components of riparian-wetland areas.

In keeping with the NRST objective of accelerating cooperative riparian management and restoration, a workshop was conducted for the interested public. While the day working with the forest staff was well spent and much was accomplished, the turnout at the public workshop emphatically brought home the level of interest in riparian management shown by the stakeholders in the area. The large hall at the local college was filled to standing room only long before the announced start time. The NRST took the opportunity brought about by such intense interest and controversy to work toward everyone using a common vocabulary and seeking a common vision. A concerted effort was made to generate recognition that everyone, regardless of personal values, really wanted the same basic outcome—sustainable and healthy streams. What everyone was arguing about wasn't the desire for different outcomes, but rather the road to be taken to achieve them. The workshop participants were provided basic information on stream function and grazing management for riparian areas. While situations this deeply embroiled in controversy cannot be solved overnight, participants did leave with a recognition of what the real problems were. They had information they could use to develop ways to contribute to restoration of their riparian areas, and a renewed resolve to work cooperatively towards riparian restoration.



Stakeholders:
Beaverhead-Deerlodge National Forest
and Bureau of Land Management
Dillon Resource Area
Bureau of Land Management personnel,
state agency and local government representatives,
Beaverhead Conservation District members,
ranchers, landowners, and various members
of the community.

> ***"It is not enough to have intellectual (or human) capital, grounded in good science, to resolve conflicts of values, interests, and relationships. People must always trust each other and care about meeting each other's needs to reach successful agreement in good faith. Information does not resolve social conflicts, people do."***

Timothy J. Duane in "Community Participation
in Ecosystem Management," Ecology
Law Quarterly 24(4):771–798.

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[illegible] Cooperative [illegible]
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In April 1998, a special training session was held in Reno, Nevada, which was sponsored by the national office of the U.S. Department of Agriculture Cooperative State Research, Education, and Extension Service and coordinated by the Oregon State University Rangeland Extension Office. It was attended by extension personnel from all over the West, parts of the Midwest, and even American Samoa and Guam. The session resulted in stronger State Cadres and also led to several assistance trips for the National Riparian Service Team (NRST) at the request of individuals attendees.

A large component of the strategy to accelerate cooperative riparian restoration and management is outreach and education. Much of this work is based on establishing relationships and providing information to build capacity, which leads to better decisions for riparian-wetland management. A basic premise of the approach is the need to work on entire systems, which often include a mix of federal, state, and private land along the riparian continuum. The training session in Reno was a valuable way to establish relationships with the Cooperative Extension Service. An effort was made to recruit at least one or two extension employees from each area to help training teams go into communities and teach a common way to evaluate the condition of riparian-wetland areas. Because of its educational role and, in particular, the relationship it has within its communities, the Cooperative Extension Service is considered a key asset toward making the program successful.

Stakeholders:
U.S. Department of Agriculture Cooperative State Research, Education, and Extension Service; Oregon State University Rangeland Extension Office; and communities.

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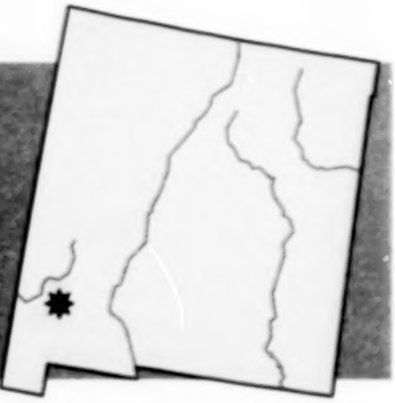


The Diamond Bar allotment, located primarily in the Gila Wilderness, received national attention due to controversy and litigation pertaining to livestock grazing. While livestock use did cease, part of a settlement agreement that the Forest Service entered into with Gila Watch, Wilderness Watch, and the Rio Grande chapter of Trout Unlimited stated that agency personnel and a professor from Arizona State University would revisit the allotment during the 2000 growing season. Their purpose was to reevaluate certain disputed reaches based upon a method both parties could agree to. This led to a request for the National Riparian Service Team (NRST) to examine parts of South Diamond and Main Diamond Creeks using the proper functioning condition (PFC) assessment method.

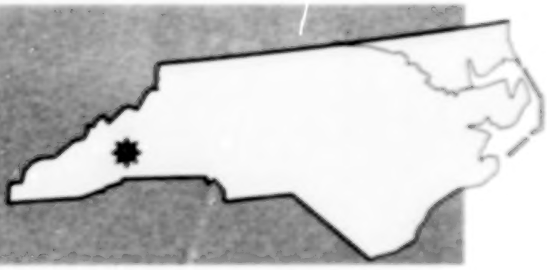
The controversy stemmed from the plaintiffs disputing the determinations and related management implications made by the Forest Service when it classified portions of the two creeks as nonriparian. The NRST's objectives were to assess riparian potential and functionality of these reaches and to determine whether they were riparian or not. The results of the evaluation indicated that some reaches were actually an interrupted/intermittent riparian "complex"; the NRST recommended that they should be mapped as such and that these areas should be managed for recovery appropriate to their potential. In addition to conducting the evaluation, the NRST outlined recovery expectations; factors affecting recovery, such as use of woody regeneration by elk and deer; and options relative to the reintroduction of livestock grazing. This service trip enabled the Forest Service to complete the final actions required in the settlement agreement.

At the confluence of South Diamond Creek and Main Diamond Creek, the vegetation is a mix of cottonwood, pine, and upland grasses.

Looking upstream on Main Diamond Creek at its confluence with South Diamond Creek, the vegetation is a mix of pine and upland grasses.

Stakeholders:
Forest Service,
Gila National Forest,
Gila Watch,
Wilderness Watch,
and Rio Grande
chapter of
Trout Unlimited

North Carolina:
National Forests in North Carolina



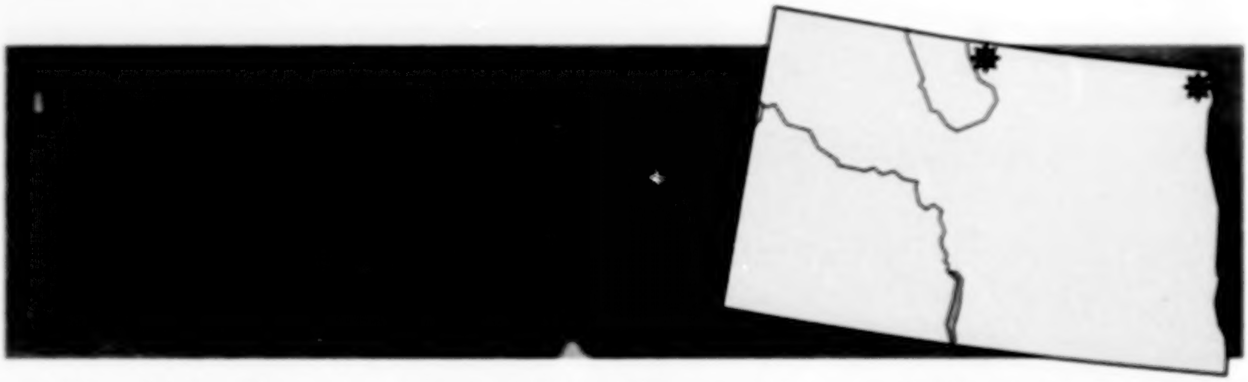
Asheville, North Carolina • May 23–25, 2000

Individuals from the North Carolina national forests began a visionary effort to pull together the people necessary to conduct cooperative watershed assessments on both public and private lands. The Forest Service requested that the National Riparian Service Team (NRST), acting as a catalyst for this joint effort, come to North Carolina and introduce the proper functioning condition (PFC) assessment method to help focus the group and provide a starting point toward development of a shared strategy. Discussions centered on how this method could be applied to the streams in this region and on aggregating the assessments to provide meaningful information at a watershed scale. The NRST also explained how the PFC assessment results can be combined with aquatic habitat and water quality data for a more complete and effective interpretation of system condition.

Overall, the group felt that the PFC methodology was applicable to their area and could be of use on their systems. Another benefit stemming from this session, in addition to strengthening the relationships and focus within the group, was the commitment made on the part of several members of the group to begin development of a stream classification for this part of the country. This classification is greatly needed and will help the group achieve their goal of conducting cooperative watershed assessments.

The group discusses the French Broad River riparian area in North Carolina.

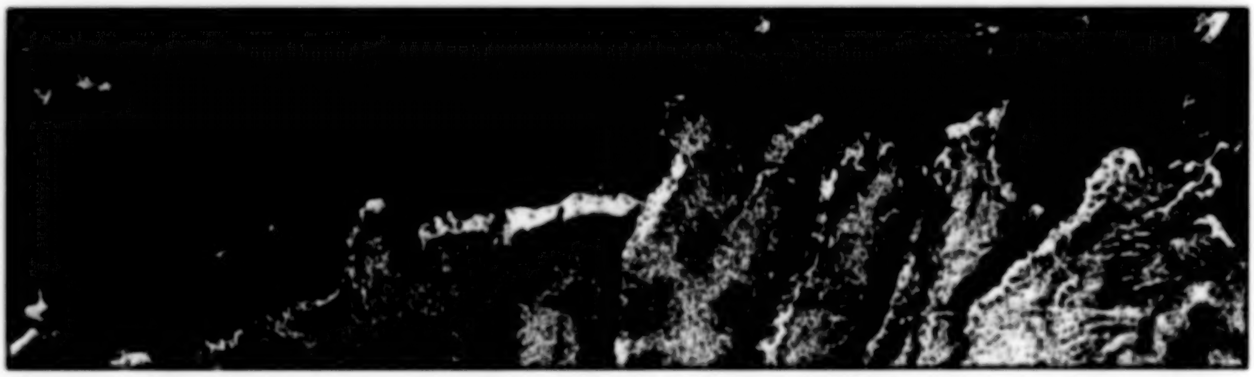
Stakeholders:
Forest Service, Natural Resources Conservation Service, Environmental Protection Agency, U.S. Fish and Wildlife Service, U.S. Geological Survey, North Carolina Wildlife Resources Commission, North Carolina Department of Environment and Natural Resources, North Carolina State University Water Quality Group, North Carolina Division of Forest Resources, North Carolina Council of Trout Unlimited, Coldwater Streams and Trout Habitat in Southern Appalachia, Center for Forested Wetlands Research, French Broad River Watershed Education Training Center, Charlotte Storm Water Services, and Duke Power.



The Upper Dakota Resource Conservation and Development Council coordinator and the watershed coordinator for the Red River Regional Council had the same objective when they asked the National Riparian Service Team (NRST) to provide training in North Dakota. The aim was to foster awareness and build skills to assess the condition of riparian-wetland areas as the first step in an active restoration strategy. These coordinators assembled a diverse mix of people for two sessions, one in the Des Lac/Souris River basin and one in the Red River basin. Attendees included employees from the Natural Resources Conservation Service, North Dakota Game and Fish, North Dakota Health Department, U.S. Fish and Wildlife Service, and private landowners.

While the proper functioning condition (PFC) assessment training established a good foundation, these coordinators recognized that livestock grazing practices affect riparian condition and requested that the NRST provide training on grazing management for riparian areas as well. In addition, the NRST provided instruction for using aerial photography to assess PFC of riparian-wetland areas to help with another of the group's objectives, which was to do a baseline assessment on a large geographic area in eastern North Dakota.

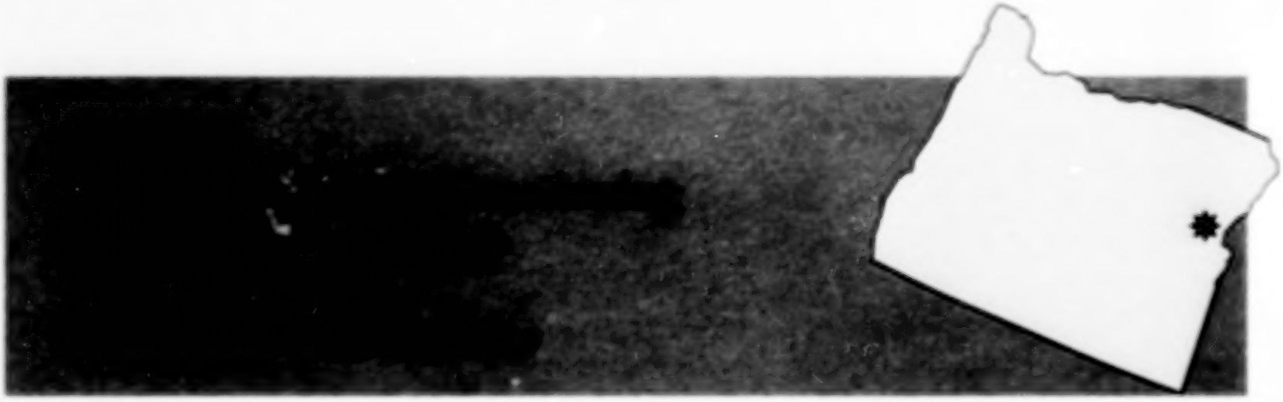
Stakeholders:
Natural Resources Conservation Service, U.S. Fish and Wildlife Service, private landowners, North Dakota Game and Fish, North Dakota Health Department, State Forestry Service, and Forest Service



Aerial photography can be used to assess the functioning condition of riparian-wetland areas. The photos can be interpreted to make an initial assessment and can help identify areas that should be visited on the ground to verify those interpretations. The red areas in this color infrared aerial photo show where vegetation is still growing.

There is not enough adequate riparian-wetland vegetation cover present to protect banks and dissipate energy during high flows. Many streambanks have shallow-rooted species such as Kentucky bluegrass, and excess bank cutting is occurring at these locations.

The middle branch of Park River in North Dakota requires large woody material to function properly. Down large woody material is lacking in the channel and on the floodplain. Very few woody species are growing on the floodplain. Middle age classes are lacking on the terrace.



The Burnt River, in eastern Oregon, is one of many streams across the West that is categorized as water quality limited according to the state's Department of Environmental Quality standards set in accordance with the Clean Water Act. Although the Burnt River is not in Oregon's highest priority area, the landowners along the Burnt River wanted to address water quality issues before regulatory mandates were imposed. The primary limiting factor on the Burnt River is temperature. Many landowners, and some university professors, proposed that the river could never meet standards, even in a pristine state.

A multiple-year study involving Oregon State University; Oregon Department of Environmental Quality; Bureau of Reclamation; and other state, federal, and private entities was initiated to determine:
1) the present conditions along the Burnt River,
2) what the potential river characteristics might be,
3) what the potential temperatures might be, and
4) what, if any, management practices might be appropriate to restore the river to its best capability.

Oregon State University, with concurrence of the private landowners and other cooperators, requested the National Riparian Service Team's (NRST's) assistance in

Participants examine attributes of the Burnt River in northeast Oregon.

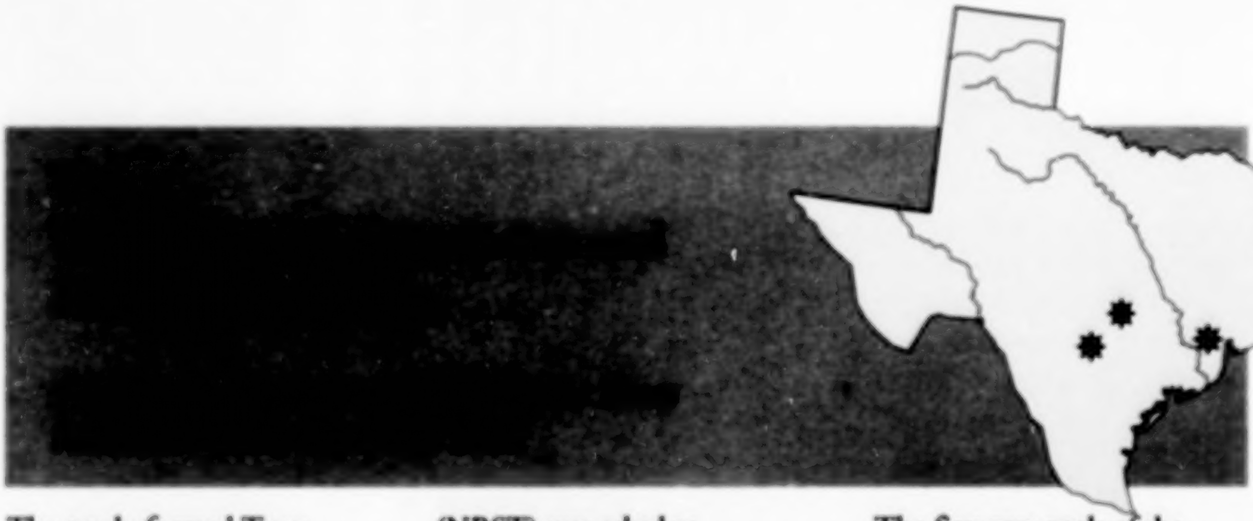
conducting a proper functioning condition (PFC) assessment to establish current riparian conditions, provide input on potential channel and vegetation attributes, and, together with the Extension Service, provide management recommendations. Approximately 50 miles of the Burnt River were assessed in two 1-week field sessions, with additional reviews of and comments on various technical reports occurring throughout the study. Management recommendations were provided to each landowner in the field, and generic practices were described for reports.

Although there is still not agreement on whether the temperature standard for the Burnt River is appropriate, there is a better understanding of the limiting factors to sustainable function of the system. However, many landowners are now committed to managing the river based on the determined capability given those limiting factors.

Stakeholders:

Burnt River Irrigation District, Burnt River Soil and Water Conservation District, Oregon Department of Environmental Quality, Oregon Department of Agriculture, Bureau of Reclamation, Oregon State University Department of Rangeland Resources, Oregon State University Extension (Baker County), Environmental Defense, Oregon Farm Bureau, Oregon Department of Fish and Wildlife, Natural Resources Conservation Service, Wallowa-Whitman National Forest, Bureau of Land Management Vale District, Oregon Water Resources Department, Oregon Water Resources Congress, and Oregon Cattlemen's Association.

Multiple ownership is an importanat factor in the assessment of the watershed and the development of management recommendations.



The newly formed Texas Riparian Association (TRA) has grown from several members to hundreds of members, and it continues to grow. Many worthwhile endeavors begin with a few people who decide to act on their passion and vision. In this case, the passion is riparian-wetland health and all the values that come from this precious resource. An initial meeting in July 2000, and then a second meeting the following November in Austin, was enough to launch a process to establish a steering committee, develop bylaws, and select a board of directors for the new organization. The National Riparian Service Team (NRST) was asked to participate in this second meeting to introduce one way to create a common vision of what is possible for riparian resources when people can evaluate them and communicate using common methods, terms, and definitions.

Undeveloped park areas like Buffalo Bayou in Houston, Texas, can provide management opportunities even in highly developed watersheds.

Getting people together to discuss function builds awareness, acceptance, and understanding. This process is just as vital in urban areas, such as Tinsley Park in Houston, Texas, as it is in wildland settings.

The impacts from mountain biking are evident in Memorial Park in Houston, Texas.

The first two goals of the TRA are "to promote statewide education on the health of riparian systems," and "to promote actions statewide that conserve, restore, and maintain healthy riparian systems." Because the NRST's goals are closely aligned with these goals, the NRST was asked to provide two training sessions as the first activities sponsored by the TRA. Sessions were held in Houston and San Antonio, with an emphasis on urban riparian areas and some discussion of more rural settings. Attendees included a diverse mix of public and private interests. These sessions resulted in additional requests for training and the desire to establish training teams in Texas. The NRST will continue to provide assistance to help meet these needs.

Stakeholders:

Bayou Preservation Association, Harris County Flood Control District, and Texas Riparian Association.

Utah
Salt Creek, Canyonlands National Park

Moab, Utah • May 21–25 2001

Canyonlands National Park is involved in litigation with both environmental interests and off-highway vehicle user groups. The issue is whether four-wheel drive vehicles should be allowed in Salt Creek, which is also claimed by the county as a highway right-of-way under RS2477. To address this litigation, National Park Service resource specialists are preparing a new environmental assessment to analyze the effects of vehicle travel in Salt Creek, above Peekaboo Spring. They asked the National Riparian Service Team (NRST) to help them apply the proper functioning condition (PFC) assessment method, specifically to address motorized travel effects on the physical functionality of Salt Creek's riparian-wetland resources.

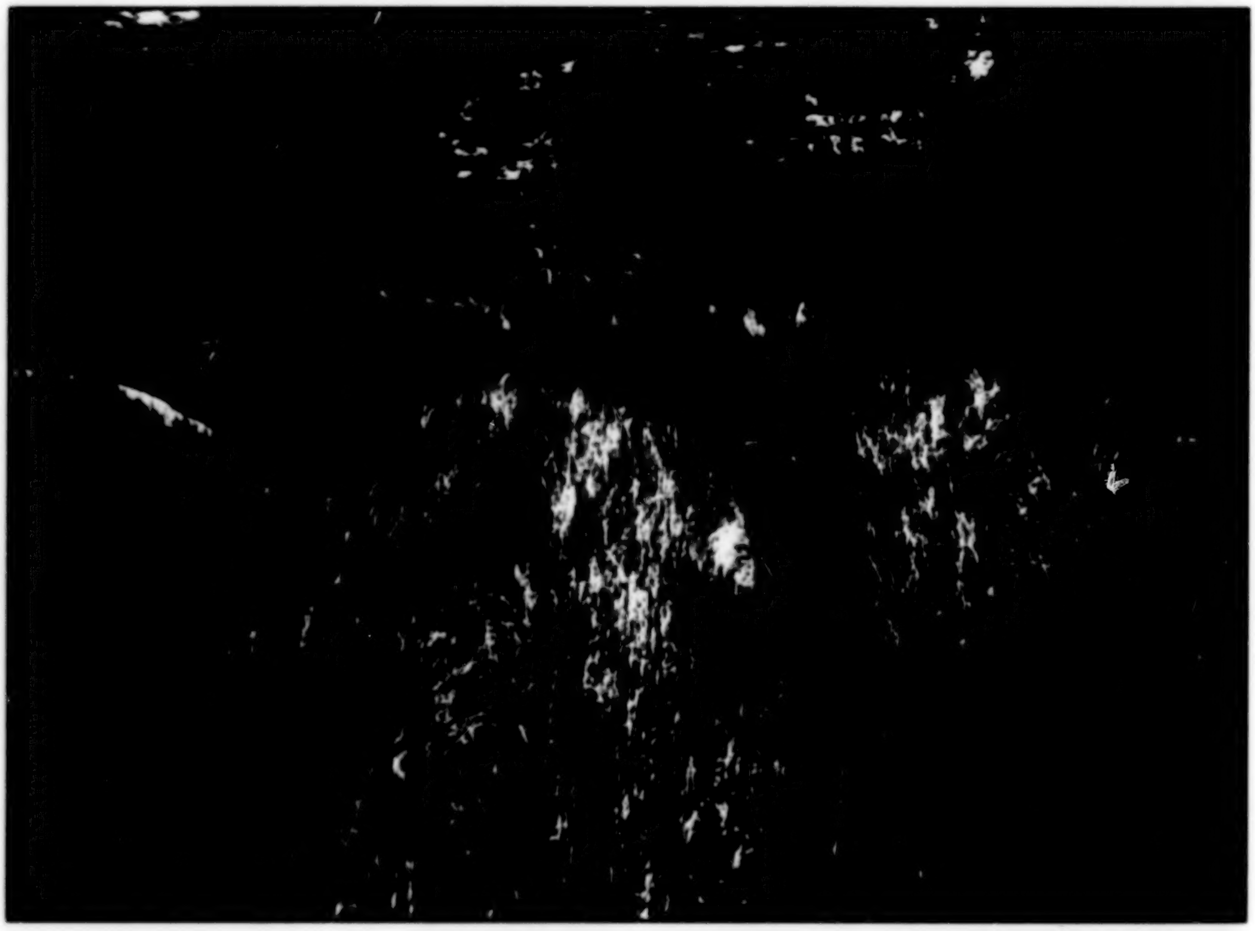
An assessment of three representative stream reaches was completed during a week-long visit in May 2001. The NRST and a National Park Service interdisciplinary team,

Salt Creek, where the intermittent stream is also the roadbed, is functioning at-risk, with no apparent trend.

which included a hydrologist, biologist, and engineer, performed the assessment together and supplemented this with the use of aerial photos from the 1950s and 1990s. This combination provided information relative to conditions before the road existed and helped in determining trend over time. During that same week, the NRST met with the park superintendent and management staff to present and discuss their findings. A written report was provided later.

Lasting, effective riparian restoration and management of Salt Creek is going to require the collaboration of all interested parties. The National Park Service now has an assessment report they can use to help explain what will be required for Salt Creek to have riparian areas that are in proper functioning condition.

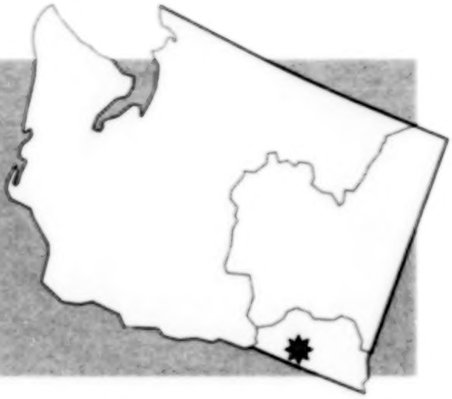
Stakeholder:
National Park Service, local residents, officials of the surrounding counties, off-highway vehicle user groups, and environmentalists.



Salt Creek above Angel Arch tributary is in proper functioning condition.

Washington:
Walla Walla Community Proper Functioning Condition Workshop

Walla Walla, Washington • September 5–6, 2001



The Cambium Institute (an organization committed to research and educational outreach regarding community sustainability issues), Kooskooski Commons, the Institute for Washington's Future, and Fountainhead, Inc., are working collaboratively to improve the effectiveness of riparian restoration efforts in the Walla Walla valley. They are striving to attain this goal by promoting the establishment of common terms and definitions as well as common methods for evaluating riparian conditions. Their ultimate goal is to foster cooperative, community-based action designed to enhance the economy, ecology, and social welfare within the Walla Walla watershed and other Pacific Northwest watersheds.

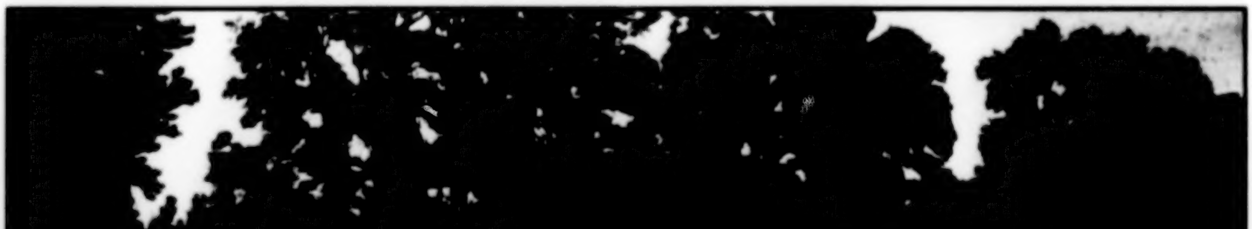
This laudable effort has been hampered by what can be characterized as independent and uncoordinated riparian restoration projects, which, while well intentioned, have yielded mixed results. In too many cases, very substantial investments were made with rather unimpressive outcomes. This situation has raised considerable doubt within the agricultural community as to the value of riparian restoration efforts. The agricultural community is also concerned that riparian buffers are being designed and implemented that are essentially nonfunctional and substantially wider than necessary. These perceptions have resulted in a pervasive belief that money is being wasted and opportunities are being squandered with little benefit to the ecological health of the watershed and virtually no positive effect to the economy and social welfare of the local community.

To turn this situation around, the group is working to create a better foundation for effective design and implementation of riparian

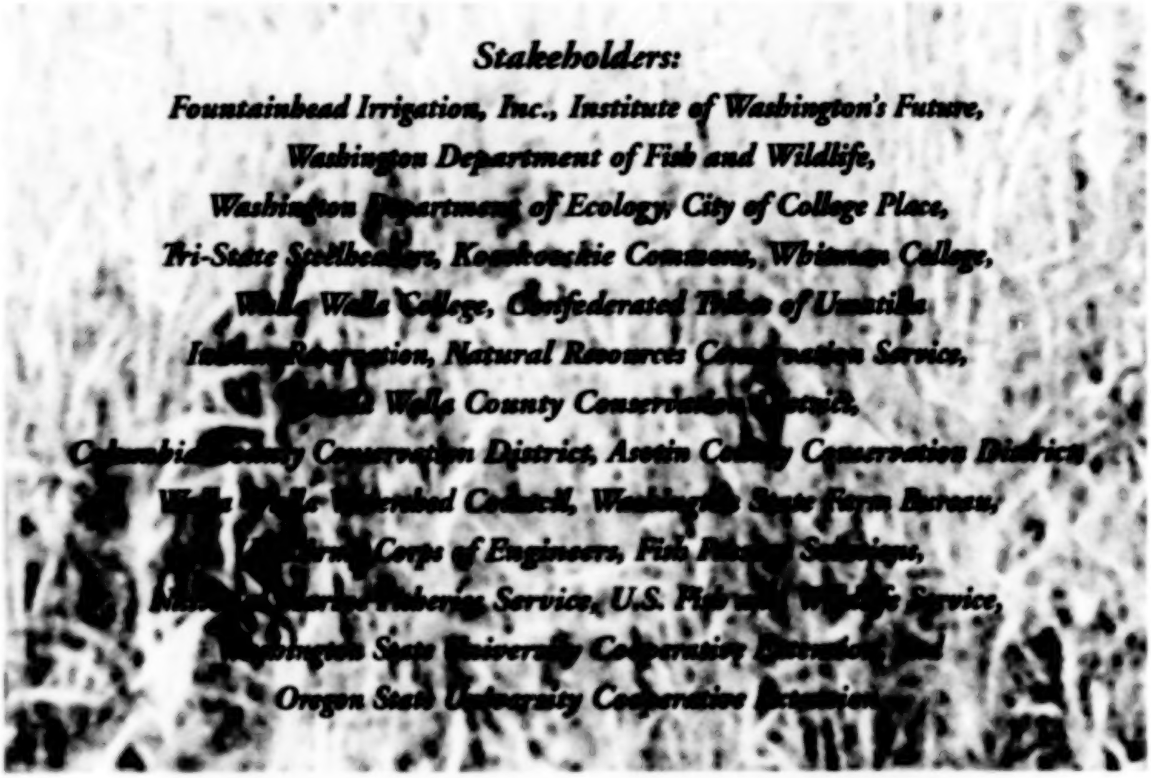
Diversion of water from Mill Creek drainage to Yellowhawk Creek causes dramatic change in both creeks.

restoration activities. They intend to do this by fostering a more cooperative environment between the various agencies, with the hope that it will lead to development of a common agenda. They are now attempting to communicate the critical importance of integrating ecological, economic, and social factors; clear functional goals; careful assessment of site-specific conditions; and appropriate design and implementation strategies to encourage widespread participation and produce the desired effects.

The group recognized that a riparian assessment process, understood and supported by all stakeholders, was a critical missing link. Such an assessment protocol would provide information useful for designing ecologically and economically sensible riparian restoration plans. The NRST was asked to give a presentation on cooperative riparian restoration and management, including a training course covering the proper functioning condition (PFC) assessment method. For 2 days, the NRST led workshop participants through a process for developing collaborative, watershed-scale, riparian restoration efforts. At one point, a participant made the statement, "If we had heard this several years ago, we'd have wasted a lot less money and restored a lot more streams." This emphatic statement underscores the critical need to search out these groups who are struggling to restore watershed and riparian conditions and to help them succeed by providing training and technical assistance.



The community has many sites to consider in making decisions for prioritizing restoration.



Stakeholders:

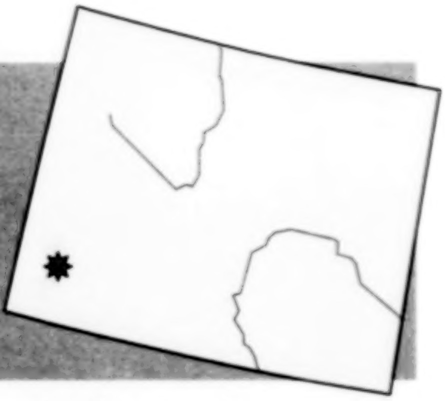
Fountainhead Irrigation, Inc., Institute of Washington's Future,
Washington Department of Fish and Wildlife,
Washington Department of Ecology, City of College Place,
Tri-State Steelheaders, Kooskooskie Commons, Whitman College,
Walla Walla College, Confederated Tribes of Umatilla
Indian Reservation, Natural Resources Conservation Service,
Walla Walla County Conservation District,
Columbia County Conservation District, Asotin County Conservation District,
Walla Walla Watershed Council, Washington State Farm Bureau,
[illegible] Army Corps of Engineers, Fish Passage Solutions,
National Marine Fisheries Service, U.S. Fish and Wildlife Service,
Washington State University Cooperative Extension, and
Oregon State University Cooperative Extension.

This riparian area along a reach of Yellowhawk Creek was probably intermittent prior to the interbasin transfer of water from Mill Creek. Healthy riparian-wetland vegetation armors and holds the streambank.

Wyoming

Cumberland Allotment Cooperative [illegible]

Kemmerer, Wyoming • September 22–26, 1997



The Cumberland grazing allotment, administered by the Bureau of Land Management, encompasses nearly half a million acres in southwestern Wyoming. The allotment is home to the largest migratory antelope herd in the United States. Countless deer, elk, moose, sage grouse, and other species of wildlife, as well as fish, inhabit the area. Oil, gas, and coal reserves lie beneath the surface and are continually being developed. At least 20 livestock permittees sustain their family's livelihood by grazing approximately 10,000 cows and several thousand sheep on the allotment. Some ranchers have used this land for generations.

With this incredible diversity of natural and economic resources, conflict has also developed among different uses and the advocates for those uses. Past attempts at

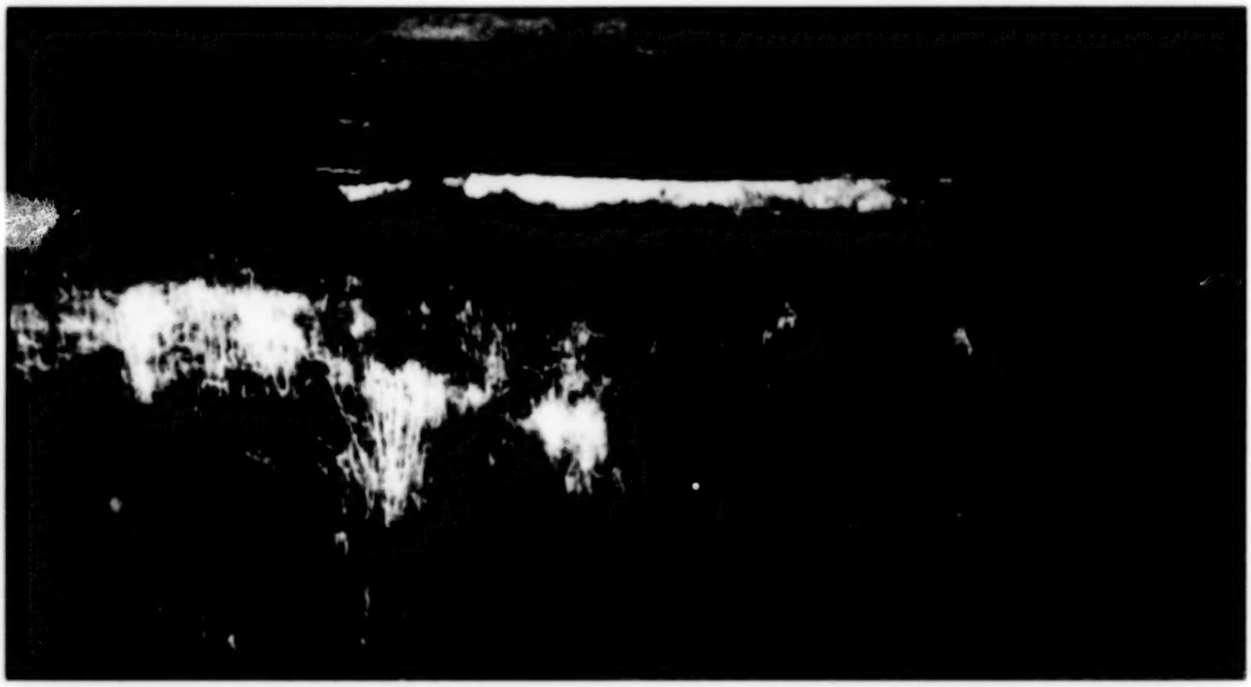
Healthy streams can be achieved through bringing people together to focus on riparian area function.

administrative remedies have resulted in great mistrust between local agency representatives, environmental and wildlife interests, and livestock producers. A legacy of conflict and mistrust seemed to prevail into recent attempts at cooperative resource management, especially where relatively new concerns over grazing and riparian management had emerged. Upon reaching an apparent impasse in the cooperative planning process, participants agreed to consider an evaluation by, and input from, the National Riparian Service Team (NRST).

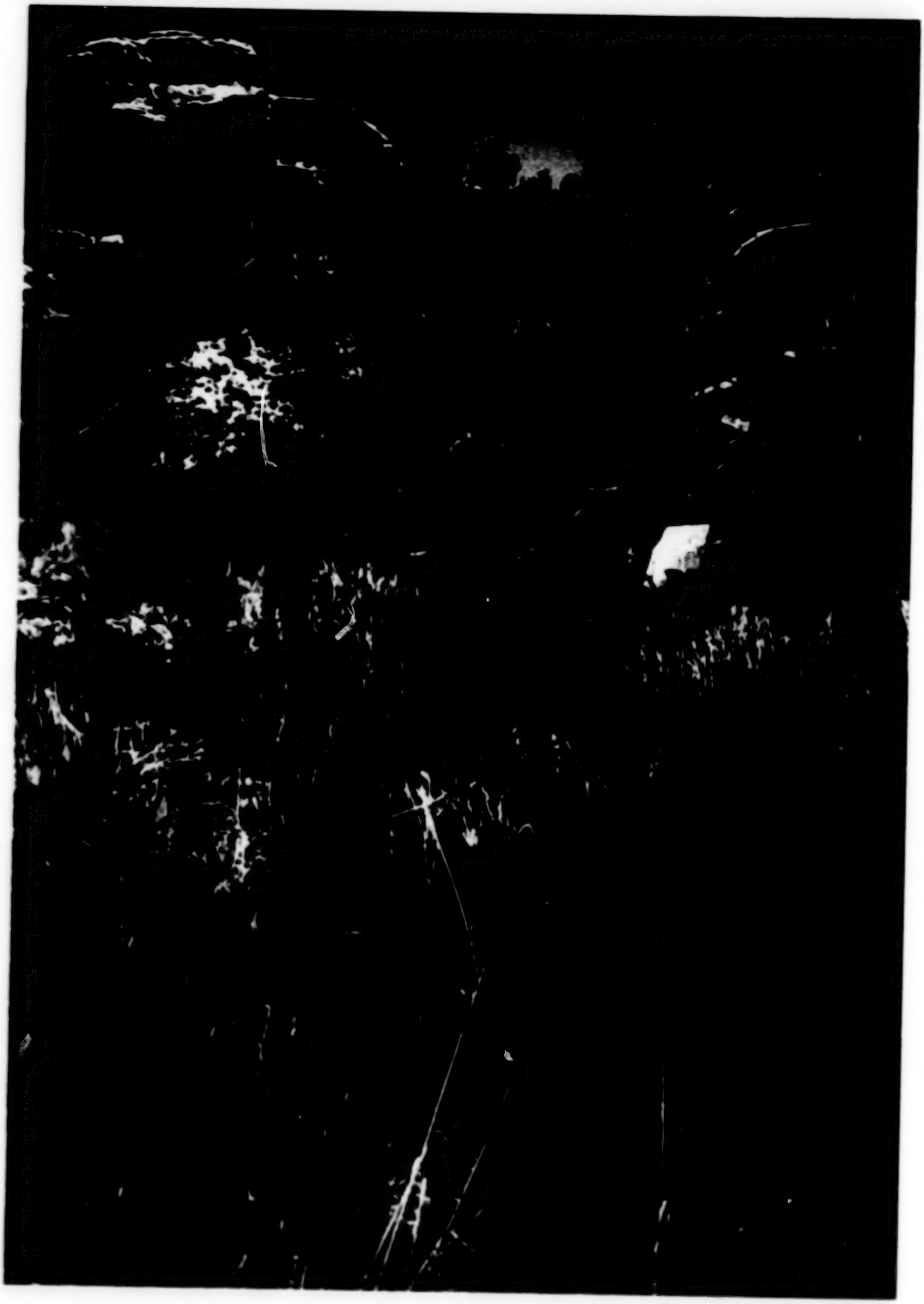
By focusing on the functions of the riparian areas rather than pitting one use against another, and then offering alternatives for management toward those functions, the NRST was able to help facilitate the local planning process. Although there are still adaptations being made, individual feedback from participants indicates acceptable progress is being made toward sustainable natural resource production while maintaining economically viable livelihoods.

Stakeholders:

Wyoming Fish and Game Department, Bear River Regional Commission, cattle permittees, sheep permittees, Medicine Butte Wildlife and Hunters Association, Pittsburgh and Midway Coal Company, Bureau of Land Management Kemmerer Resource Area, University of Wyoming, Wyoming Extension Service, National Wildlife Federation, Wyoming Wildlife Federation, and Chevron Gas Company.



Upland grass responded well after a prescribed burn; healthy uplands contribute to functioning riparian-wetland areas.



One of the important aspects of this approach is the outreach...

One of the important aspects of this approach is the outreach required to communicate the existence of the initiative as well as the opportunities it provides. This list illustrates the extent and diversity of this outreach:

Community, Industry, and Conservation Interests

- American Fisheries Society
- American Rivers National Staff
- American Society of Civil Engineers
- American Sportfishing Association
- American Water Resources Association
- Boone and Crockett Club
- Center for Water and Environmental Sustainability
- Collaborative Stewardship Workshop
- Colorado Riparian Association
- Columbia River Intertribal Fish Commission
- Consensus Institute
- Crook County Watershed Council
- Deschutes Basin Resources Conservancy
- Deschutes Watershed Council
- Eastern Oregon Agriculture Research Center
- For the Sake of Salmon
- Harney County Watershed Council
- Hood Canal Coordinating Council
- Idaho Cattlemen's Association
- International Association for Erosion Control
- International Symposium for Society and Resource Management
- Izaak Walton League
- Linder Farm Network
- Malheur/Owyhee Watershed Council
- Mule Deer Foundation
- National Cattlemen's Beef Association
- National Conservation Buffer Initiative
- National Fish and Wildlife Foundation
- National Research Council Riparian Study Committee
- Natural Wildlife Federation
- Nevada Cattlemen's Association
- New Mexico Riparian Association
- North Fork Gunnison River Improvement Association
- Northwest Ag News Radio
- Northwest Forest Soils Council
- Northwest Power Planning Council
- Oregon Association of Conservation Districts
- Oregon Cattlemen's Association
- Oregon Governor's Healthy Streams Partnership
- Oregon Governor's Watershed Enhancement Board
- Oregon Natural Desert Association
- Oregon Natural Resource Council
- Oregon State University
- Oregon Trout
- Oregon Water Resources Commission

Oregon Watershed Improvement Council
Pacific Northwest Institute of Journalism and Natural Resources
Pacific Rivers Council
Partners in Flight Western Working Group
Range Magazine
Regional Watershed Roundtables
Rocky Mountain Elk Foundation
Scott's Valley Watershed Council
Sierra Club
Society for Range Management
Society of American Foresters
Soil and Water Conservation Society
Texas Riparian Association
The Atlantic Monthly Magazine
The Quivira Coalition
The Wildlife Society
Trout Unlimited
Utah Riparian Council
Washington Cattlemen's Association
Watershed Management Council
Western Governor's Association
Western States Water Resources Council
Western Watershed Project
Wildlife Management Institute
Willow Creek Watershed Council

Government and Universities

Bureau of Land Management and Forest Service Executive Leadership
Bureau of Land Management and Forest Service State and Regional Staff
Bureau of Land Management Director and Washington Office Staff
Bureau of Land Management National Science and Technology Center
Congressional Staffers from members of the Senate Energy and Natural Resources Committee, House Resources Committee, and House Resources Subcommittee on Parks and Public Lands
Department of Agriculture Deputy Undersecretary and Assistant Deputy Undersecretaries for Natural Resources and Environment
Department of the Interior Secretary and Assistant Secretaries
Environmental Protection Agency
Federal Highway Administration
Forest Service Chief and Washington Office Staff
Forest Service - International Forestry and Cooperative Forestry Programs
Forest Service - San Dimas Technology and Development Center
National Marine Fisheries Service
Natural Resources Conservation Service Chief and National Headquarters Staff
Natural Resources Conservation Service Institutes and Plant Material Centers
Natural Resources Conservation Service Regional Conservationists and Staff (Northern Plains and West Region)
Natural Resources Conservation Service State Conservationists - Western Region Board of Directors
Universities in the 11 Western States, Texas, Oklahoma, and North Carolina
University of British Columbia
University of Mexico
U.S. Fish and Wildlife Service
U.S. Geological Survey Biological Resources Division
Various State Departments of Environmental Quality, Agriculture, Lands, Fish and Game, and Forestry

...the Riparian Coordination Network has created materials for improved instruction...

Since the beginning of the initiative, the Riparian Coordination Network has created materials for improved instruction and learning. The following is a list of the principal products produced:

- Video of the National Satellite Broadcast (Initiative Kickoff)
- Train the Trainers Manuals for State Cadres
- Technical References:
    - TR-1737-9S, Spanish version of "Process for Assessing Proper Functioning Condition"
    - TR-1737-11S, Spanish version of "Process for Assessing Proper Functioning Condition for Lentic Riparian-Wetland Areas"
    - TR 1737-14, "Grazing Management for Riparian-Wetland Areas"
    - TR 1737-15, "A User Guide to Assessing Proper Functioning Condition and the Supporting Science for Lotic Areas"
    - TR 1737-16, "A User Guide to Assessing Proper Functioning Condition and the Supporting Science for Lentic Areas"
- Soil Bioengineering, An Alternative for Roadside Management - A Practical Guide
- General Technical Reference 47, Monitoring the Vegetation Resources in Riparian Areas
- Various instructional materials: slides, presentations, CDs, handouts, and others

Customer feedback is one way to determine if objectives are being met.

Customer feedback is one way to determine if objectives are being met. These sample quotes are indications that they are:

"Thank you for coming to our watershed and conducting a training and assessment of Indian Creek. The work that you did with landowners and others during your three day visit was extremely helpful and really opened the eyes of many to the benefits of a proper functioning stream system and proper land management practices."

Ceci Dale-Cesmat, Rangeland Management Specialist, Feather River Resource Conservation District and the landowners of Indian Valley

"'The combination of classroom lectures with discussion among participants followed by field training provided a very constructive learning experience for all attendees. The opportunity to engage in serious discussions with the course instructors and with fellow students, enabled us to expand our community networks and build partnerships between organizations. We engaged in a 'community conversation.'"

Richard W. Becker, President, New Mexico Riparian Council

"WMI (Wildlife Management Institute) encourages and supports this interagency approach to riparian restoration in cooperation with local landowners and other interested parties. We believe there is great potential benefit to be derived from a proliferation of such on-the-ground, cooperative problem-solving. It seems to be an approach which works, which generates good will, as well as positive results."

James R. Woehr, Senior, Scientist Wildlife Management Institute

"If the policy makers will recognize the role PFC can play in addressing these issues (water quality and aquatic habitat) and will allow it to be used appropriately, private land owners as well as public land managers will benefit by being able to prioritize streams for improvement and through development of appropriate management plans."

Michael M. Borman, Extension Rangeland Resources Specialist Oregon State University

"They listened individually to our concerns and misconceptions and helped us to understand. They were able to explain what was reality and what was factual here for us and draw us all together to keep us all going....so we could all continue toward the same things and keep us from being separatists."

Wallace 'Wally' Schulthess, Jr., Permittee, Randolph, UT

"Their suggestions and reports are based on sound science and years of true-to-life experiences–not political agendas and misconception . They are invaluable to both the government agency people as well as the caretakers on the land."

Mary E. Thoman, Permittee, Kemmerer, WY

"You have made a major contribution to ecosystem assessment, and I wish you the best in taking it the next step."

Mark M. Brinson, Chairman, National Research Council Riparian Committee

"The dramatic changes illustrated by your slides was impressive. Hopefully, such practices will spread across the west."

Tony Willardson, Associate Director, Western States Water Council

"I have had many comments on how useful it (the training session) was to individuals. Perhaps most importantly I think it went a long way toward diffusing the situation that has developed between rancher/grazing permit holders and BLM managers. Thanks again."

Roger Banner, Cooperative Extension, Utah State University

"The Malheur-Owyhee Watershed Council would like to thank you and the other instructors for the extraordinary Proper Functioning Condition class that you led earlier this month. We have heard comments like 'wonderful,' 'changed my mind,' 'wonder if I can use these ideas to restore my rocky stream,' and 'we need to get the word out about PFC.'"

Herb Futter, Chairman, Malheur-Owyhee Watershed Council

"The whole concept of Proper Functioning Condition has really changed the way I look at land and riparian health. Although I'm no hydrologist, nor much of a botanist, I find PFC to be an extremely useful tool in explaining the importance of healthy ecosystems to a variety of audiences. In fact, I think it is a core concept for future environmental activism (the good kind!).

Thanks again for the training and all your hard work. Please tell the other members of the Team that because of their dedication, we are beginning to see real progress on the back forty."

Courtney White, Executive Director, The Quivira Coalition

"Who could put a price on the learning and changes in attitude that occurred as the result of the week?"

Tom Goodwin, District Ranger, Saguache Ranger District

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13. ABSTRACT *(Maximum 200 words)*

In 1996, the Bureau of Land Management in the Department of the Interior and the Forest Service and Natural Resources Conservation Service in the Department of Agriculture initiated a strategy to accelerate cooperative riparian restoration and management. A network of individuals was formed to implement the strategy. The strategy recognizes that effective restoration and management is best achieved through participation of all interested parties. An extensive outreach and education effort encourages problem resolution at the ground level by the people most affected. Over 250 briefings and presentations introducing the strategy have reached between 8,000 and 9,000 people. To date, over 325 training sessions have been conducted for approximately 10,000 people. Approximately 125 service trips have resulted in assistance to an additional 2,500 people. These activities are successfully achieving the strategy's objective of bringing people together to build awareness and understanding, which leads to improved relationships as well as improved restoration and management of riparian-wetland resources.

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